U.S. Patent Application No. 10/681,352
Amendment After Allowance dated August 20, 2009
Reply to Notice to File Corrected Application Papers of August 11, 2009
Replacement Sheet

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| SS        | 83                        | 8   |       | ş   | ති     | <del>1</del> | 4   | 35               | 29                              | 28              | 27                                      | 24     |        | 73                             |          |           |                     |                  |
|-----------|---------------------------|---|-------|---|--------|--------------|---|------------------|---------------------------------|-----------------|---|--------|--------|--------------------------------|----------|-----------|---------------------|------------------|
| )   agp37 | aqp30                     |   | agp28 |   |        |              | aqpo  |                  |                                 |                 |   | ž      | agp 10 | *******                        | aqp 27   | 8         |                     |                  |
| ) DIY     | YSY                       | ្ត  | GLY   | Ę   | E      | AG           | Y.  | PS               | 5                               | Sd7             | झ                                       | ×      | AS     | 8                              | AS       | Diversity |                     |                  |
|           |                           | 28S=28T=<br>30S=371=4<br>6V=46E=4<br>7F=47Y=5<br>2P=52L=5 | (de)  | E R   | E=34   |              |   | 3P=3S=9L<br>=37D |                                 |                 |   |        |        | ,,,,,,                         |          | ,,,,,,    | Equivalence         |                  |
|           |                           |   |       |   |        |              | (1)4(+))  |                  |                                 |                 |   |        |        |                                |          | Totai     | Total (+)<br>vs (-) | Prograsis        |
|           |                           |   |       |   |        |              | Thetero*(-)   | ,                | *****                           |                 | 15**45%                                 |        |        | <>                             |          | Total     | Total (homo)        | Prognosis        |
| DY68      | SY75                      | ST68.2  | .,,,  | LR67.4  | LM70.1 | AA67         | LY71 60   | P\$88            | VV66.9                          | SS80<br>SS80    | TT86.7                                  | 1180   |        | GG66.7                         |          |           | Total               | Progross         |
|           |                           | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                   |       |   |        |              |   |                  | ,,                              | L(-jo(+)        | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |        |        | .,,,                           |          | Stomach   | Total (+) Vs<br>(-) | Prognosis        |
|           |                           | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                   |       |   |        |              |   |                  |                                 | L(-)>hetero     |   |        |        |                                |          | Stomach   | Total (homo)        | Prognosis        |
| IY83.3    | HS100                     | ST77.8  |       | RR68.1  | LM72.4 | AG68.4       | Ş   | PS69.4           | LV67.7                          | LL100           | ST67.7                                  | IM75.2 |        | DG67.7                         |          | .,,,,,,   | Stomach             | Prognasis        |
|           |                           | ***************************************                   |       | R(+)>(+)  |        | ****         | A(+)0(-)  | .,,,,,,          |                                 |                 |   |        |        | ******                         |          | Other     | Total (+)           | Prognosis        |
|           |                           | 7 · · · · · · · · · · · · · · · · · · ·                   |       | Litelaro (-<br>Izliromo<br>Ritelaro no<br>mozi il |        | (),,,,       | Yhetero-(-)   |                  |                                 |                 |   |        |        |                                |          | Other     | Total (homo)        | Prognosis        |
| DY65.3    | SY100                     | TT83.4  |       | LR67.20   | 11.70  | AA653        | 177080  | PS65.3           | LL87.5                          | LS100,<br>SS100 | SS87.5                                  | H100   |        | DD87.5                         | <b>V</b> |           | Other<br>cancers    | Progress         |
|           | Immunotherapy<br>H(+)>/-/ |   |       |   |        |              | no adjuvent<br>therapy Y(+)>(-)<br>therapherapy<br>Y(+)>(-) |                  | no adjuvant<br>therapy (7.1974) |                 | no adjuvant<br>therapy Strivi+          |        |        | no adjuvani<br>therapy D(->(+) |          |           | Total (+)<br>Vs (-) | Treatment Effect |

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|   |   | EG76.1   |  | 7                   | AG67 8          |  |                     | *************************************** | AEG            | adb88                                   | 118<br>18  |
|---|---|----------|--|---------------------|-----------------|--|---------------------|---|----------------|---|------------|
|   | - Contract of the Contract of | LV68.5   | and the second s |                     | VV66.5          |  |                     | *                                       | 71             | agp65                                   | 317        |
|   |   | EQ68.5   | •  |                     | EE68.5          |  | ••••                |   | m<br>Q         | aqp84                                   | <u></u>    |
|   | ω.  | RT72.4   | .,,,   |                     | RT69.7          | 4  - 4 4   |                     | ***                                     | RT             | . aqp77                                 | 30g        |
| į   |   | LV71.5   |  |                     | LV69.6          |  |                     |   | N              | aqp75                                   | 107        |
|   | C   | AE83.3   |  |                     | A\$800          |  |                     | <b>V</b>                                | AES            | agp74                                   | ŝ          |
| Disetero (-<br>)-franco<br>Ehetero-ho<br>mo-(-) |   | KT83.3   |  |                     | AK (000         |  |                     |   | ADK1           | aqp71                                   | 103<br>103 |
| Enetero:  |   | GR69.6   |  |                     | GG88 10         |  |                     |   | EGR            | aqp70                                   | 102        |
| Indiarosi<br>Influma<br>Vindera lia<br>mazi i   | V(+)>(-)  | W720     | Beterost<br>shamo<br>Wheterosh<br>amost i  | Wellself            | (VT0 100        | Ineterory<br>Homo<br>Vheterory<br>omor(+)  | V(+)>(-)            | }=V                                     | 7              | aqp67                                   | 8          |
| Dhetaro (<br>Priuma<br>Enderceno<br>moet)       | E(+)>(-)  | DE77.00  | Directoros-Caracinos de Caracinos de Caracin | E(+9%)              | DE701           | Dhelerovi,<br>r-homo Eh<br>elerovion<br>ovi, i   | E(+)>(-)            | 66D=66E=<br>671=68V                     | D <sub>E</sub> | адр66                                   | <b>%</b>   |
|   |   | AS100    |  |                     | AA8470          | Afromo»(<br>Phatero  |                     |   | ADSV           | aqp57                                   | 68         |
| Unetero (-<br>Phetero ho<br>(mo?) (-)           | P(+)2(-)  | LP68,4   |  |                     | LP67.20         |  |                     | F= 0                                    | Ą              | aqp56                                   | Š          |
| 11.7.   |   | LR750    |  |                     | CP1000          |  |                     | 55P=55R                                 | LPR            | aqp55                                   | 87         |
|   |   | LQ68.5   |  |                     | QQ66.5          |  |                     | CEO                                     | ြ              | aqp53                                   | 85         |
|   | ***************************************   | LP77.8   | ***************************************  |                     | LP68.2          | origination and the second and the s |                     | 52P=52L                                 | SdJ            | aqp52                                   | \$<br>4    |
|   | 7   | FY77.8   | · · · · · · · · · · · · · · · · · · ·  | C                   | FY68.2          |  |                     | F=Y                                     | FY             | agp47                                   | 79         |
|   |   | EV77.8   |  |                     | EV68.2          |  |                     | E=V                                     | ΕV             | aqp46                                   | 78         |
|   | ***************************************   | EG68.6   |  |                     | EG67            |  |                     | E-G                                     | EG             | aqp45                                   | 77         |
|   |   | W71.7    |  |                     | VV69.4          |  |                     | Α≖V                                     | AV             | aqp38                                   | 70         |
| Other   | Other   |          | Stomach  | Stomach             |                 | Total  | Totai               |   | Diversity      | B                                       |            |
| Fotal (homo)                                    | Total (+)<br>vs. (-)  | Stomach  | Total (homo)   | Total (+) vs<br>(-) | Total           | Total (homo)   | Total (+)<br>Vs (-) | Equivalence                             | -              | *************************************** |            |
| Prognosis                                       | Prognosis   | 7700700% | Prognosis  | Prognosis           | *************** | Prognosis  | Traginasis          |   |                |   |            |

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|  | aqp37   | aqp30   | aqp28  | aqp26   | aqp23                                   | aqp14                                   | aqp13 | а <b>д</b> р9   | aqp3   | aqp_4  | aqp_5   | aqp_6   | 9 dbe                                   | agp 10 | aqp_21   | agp 27 | ಧ್ವ           |                     |                    |
|--|---|---|--|---|---|---|-------|---|--|--|---|---|---|--------|--|--------|---------------|---------------------|--------------------|
|  | ŊΥ  | YSH   | 18   | CLY   | L'R                                     | S                                       | AG    | 7   | PS   | ΕV   | LPS   | ST  | <b>**</b>                               | AS     | DG   | AS     | Diversity     | *****               |                    |
|  |   | Immunotherapy Hhelero-<br>Ihomo Immunotherapy<br>Yhelero-y Thomo  |  | 电线电子 医克洛氏试验检 电电子电话 医克尔氏 医电子性 医电子性 医电子性 医电子性 医电子性 医电子性 医电子性 医电子性                             | *************************************** |   |       | no adjiwant therapy<br>Yhetaro homo-y-l<br>Immunotherapy<br>Yhetero homo-y-j                                      |  | no adjuvant therapy L(  >-hetero (homo) no adjuvant therapy  vhomo-hetero (1)            | no adjuvant therapy<br>Phomo-helero (i-i)                                   | no adjuvant therapy Si<br>whetero thomo; no<br>adjuvant therapy<br>Thomo-hetero (1) |   | re v   | no adjuvant therapy Di<br>>hatero (homo) no<br>adjuvant therapy<br>Ghomo-hatero ( ( ))   |        | Total         | Total (homo)        | : Treatment Effect |
|  | no adjuvant therapy YY(78.2), Chemotherapy DY(62.5)                                 | HY(85.6)  |  |   | *************************************** |   |       | Chemotherapy<br>LY645)<br>Immunotherapy YY<br>(63.9)  | no adjuvant<br>therapy SS/78)  | no adjuvani<br>therapy WV87.8  | instandherapy<br>PP62   | no adjuvani<br>herapy TT87.6  |   |        | no adjuvant<br>therapy CG67.6  |        |               | All cases           | Treatment Effect   |
|  | 1. 1. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.                                     |   | general measures and a second a | -   | *************************************** | *************************************** |       | Immunotherapy<br>Y(+>=(-)   |  | nd adjuvant<br>therapy LL (>(+)  | no adjuvant<br>therapy L(+)=(+)   | NIS S(-)×(+)  | *************************************** |        | no adjuvant<br>merapy Disperti   |        | Stomach       | Total (+)<br>Vs (-) | Treatment Effect   |
|  |   | Immunotherapy Hheleron,<br>Thoma Immunotherapy<br>Theteron I homo |  |   |   |   |       |   |  | no adjuvant therapy Ni-<br>Phetero (tiomo), no<br>adjuvant therapy<br>Vhomo-Hetero ((+)) | no adjuvant therapy<br>Liteteroxy i no adjuvant<br>therapy Phomo Natero (F) | no adjuvant therapy Studenter (tomo) no adjuvant therapy Thomorhetero (+1)          |   |        | no adjuvant therapy Di-<br>izheleno (homo), no<br>adjuvant therapy<br>Ghomozhellero (+)) |        | Stomach       | Total (homo)        | Freatment Effect   |
|  |   | HY(65.2)  |  |   |   |   |       | immunotherapy<br>Y(62.9)  |  | no adjuvant<br>therapy VV92 6  | no adjuvant<br>therapy PP92-6   | no adjuvant<br>therapy 1192.6   |   |        | no adjuvant<br>therapy GG92.6  |        |               | Stomach cancer      | Treatment Effect   |
| 1 CONTROL OF THE PROPERTY OF T | no adjuvant<br>therapy Y(+,>(-)   |   | de la companya del companya del companya de la comp |   |   |   |       | no adjuvant<br>therapy Y(+><-)<br>Chamotherapy<br>Y(+)>(-)  | W S(+)>(-)   |  | no adjuvant<br>therapy L (>(+)  |   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |        |  | X      | Other cancers | Total (+) Vs (-)    | Treatment Effect   |
|  | no adjuvant therapy Di<br>Thetero-Homo, no<br>adjuvant therapy<br>Ottomo netaro-s-T |   |  | 化复数 医电子性 医电子 医电子 医甲状腺素 医甲状腺素 医甲状腺素 医克尔氏 医电子性 医克克氏病 医电子性性 医电子性性 医电子性性 医电子性性 医电子性性 医克尔氏征 医电路性 | ,                                       |   |       | Immunotherapy Sheltero (-)homo no adjuvant therapy Yhetero homo(-) Chemotherapy Yhetero homo-(-) Yhetero homo-(-) | no adjuvant therapy Pri<br>Theterorhomo ino<br>adjuvant therapy<br>Shomo heteror (1) |  |   |   |   |        |  |        | Other cancers | Total (homo)        | Treatment Effect   |
|  | no adjuvant therapy<br>YY (59.7)  |   | -  |   | £                                       | į.,                                     |       | no adjurant therapy LY75.1) LY75.1) Chemotherapy LY (66.8) Immunotherapy LY (68.1)                                | no adjuvant therapy<br>SS(69.8)  |  |   |   | S                                       |        |  |        |               | Other cancers       | Treatment Effect   |

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| aqp86   | aqp65                                   | aqp64 | aqp77  | agp75 | agp74                                       | aqp71   | agp70                 | aqp67  | aqpes  | 30                                      | ano57                               | agosa | aqp55    | aqp53 | aqp52 | aqp47 | aqp46 | aqp45 | aqp38   | S             |                     |                     |
|---|---|-------|--|-------|---|---|-----------------------|--|--|---|-------------------------------------|-------|----------|-------|-------|-------|-------|-------|---|---------------|---------------------|---------------------|
| AEG   |   | EQ.   | RT   | 73    | AES   | ADKT  | EGR                   | ~  | Cr   |   | ADSV                                | م     | Egz<br>Z | ਫੋ    | Sdl   | FY    | EV    | EG    | *   | Diversity     |                     |                     |
| Immunotherapy (Shellaro>(-)>homo                  |   |       |  |       |   |   |                       | no adjuvant therapy thetero (+) Chemotherapy thetero + ) homo immunotherapy thetero + > homo no adjuvant therapy Vhetero (+) homo Chemotherapy Vhetero > + ) homo Immunotherapy Vhetero homo + ) | ho adjuvant therapy Unetero (i<br>))>homo Chemotherapy Dhetero>(<br>) homo Immunotherapy Chelero (<br>)-homo immunotherapy<br>Ehetero (i )>homo Chemotherapy<br>Ehetero (i )>homo Immunotherapy<br>Ehetero (i )-homo Immunotherapy | Patero                                  | immunumeany Anomo (all survived vi- |       |          |       |       |       |       |       |   | : Total       | Total (homo)        | Treatment Effect    |
| EG(78.2)  |   |       |  |       |   |   |                       | no adjuvant<br>berapy (V/79.6)<br>Chemotherapy<br>DE(62.1)<br>Immunotherapy<br>EE(60.3)  | no adjuvant<br>therapy EE(77.7),<br>Chemotherapy<br>DE(62.1)<br>Immunotherapy<br>EE(60.3)  | (100)                                   | Tem matterson A&                    |       |          |       |       |       |       |       |   |               | All cases           | Treatment Effect    |
| herapy<br>E(1>(+)                                 |   |       |  |       |   |   |                       |  |  |   |                                     |       |          |       |       |       |       |       |   | Stomach       | Total (+)<br>Vs (-) | Treatment<br>Effect |
|   |   |       |  |       |   |   |                       | Chemotherapy<br>Meteron(),homo<br>Chemotherapy<br>Vheteron(),homo  | Chemotherapy Dhetero ( ) homo Chemotherapy Ehetero ( ) homo  | Vhetera (-)>homa                        |                                     |       |          |       |       |       |       |       | Chemotherapy<br>Alleteron Lhomo<br>Chemotherapy<br>Vheteron Lhomo           | Stomach       | Total (homo)        | Treatment Effect    |
| Chemotherapy AA 70 5<br>Immunotherapy<br>EG(80 8) |   |       |  |       |   |   |                       | Chematherapy W(65.1)   | Chemotherapy DE(65.1)  |   | immunorherany &A(107)               |       |          |       |       |       |       |       | Chemotherapy AV(65.2)   |               | Stomach cancer      | Treatment Effect    |
|   | 3                                       | dien  |  |       |   |   |                       |  |  | *************************************** |                                     |       | ****     |       |       |       |       |       | Chemotherapy A  | Other cancers | Total (+) Vs (-)    | Treatment Effect    |
| no adjuvant therapy<br>Anetero (+)>homo           | *************************************** |       | MARKA MANANTA MANA |       | · puescues uses uses uses uses uses uses us |   |                       | Chemotherapy Instero (-1)-homo Chemotherapy Vhetero (homo)-(-)   | Chenotherapy Dhetero*(+); homo Chemotherapy Ehetero (homo:>+;)   |   |                                     |       |          |       |       |       |       |       | no adjuvant therapy Vi-) hetero>homo no adjuvant therapy Ationio hetero>(-) | Other cancers | Total (homo)        | Treatment Effect    |
| ns adjuvent therapy<br>AG(87.5)                   |   |       |  |       |   | nd adjuvent therapy AD(417) Chemotherapy TT(59.9) | Chemotherapy (V/60 8) | Chemotherapy IV(59-1)  | Chemotherapy (JE(59.4)   |   | ×                                   |       | ****     |       |       |       |       |       | no adjuvant therapy<br>AV(71.3)   |               | Other cancers       | Treatment Effect    |

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|            |   | aqp224 | aqp221      | aqp220 | aqp203 | aqp197   | aqp185                                  | aqp182   | aqp167   | aqp140 | aqp130   | aqp126 | aqp125                          | agp116 | agp90 | aqp89 | aqp87   | DO                                      |                     |                     |
|------------|---|--------|-------------|--------|--------|--|---|----------|--|--------|--|--------|---------------------------------|--------|-------|-------|---|---|---------------------|---------------------|
| survived   | A | QR     | 퓹           | 돐      | V      | Z<br>Ø   | 7                                       | Z        | 馬  | AŢ     | QR   | ਲ      | AGS                             | ₹      |       | ନ୍ଦ୍ର | 77  | Diversity                               |                     |                     |
| ••••       |   | ,      |             |        |        |  | *************************************** |          | A STATE OF THE STA |        | Immunotherapy<br>Cheterory Johanno<br>Immunotherapy<br>Rheterorytaniony) |        |                                 |        |       |       | Immunotherapy<br>Yheteroshomo (-)                                 | Total                                   | Total (homo)        | Treatment Effect    |
|            |   |        | K. C. P.    |        |        | no adjuvant<br>therapy SS(78)  |   |          | eronteonationation (control to one of the one  |        | immunotherapy<br>QR(75)  |        |                                 | •••    |       | S     | no adjuvant<br>therapy<br>FY(82.3)<br>Immunotherapy<br>LY (71.2)  |   | All cases           | Treatment Ented     |
| ********** |   |        |             |        |        |  |   |          |  |        |  | ,      | 2248,241                        |        |       | 2 * N | apy F(+)>(+)  | Stomach                                 | Total (+)<br>Vs (-) | Treatment<br>Effect |
|            |   |        | r# \$1      |        |        |  | *************************************** |          | ,  |        |  |        |                                 |        |       |       | r Immunotherapy A,<br>>-(homo)<br>Chemotherapy<br>Fhomo-hetero(,) | Stomach                                 | Total (homo)        | Treatment Effect    |
| ****       |   |        | 2.00        |        |        | NIS BS(70)   | *************************************** |          |  |        |  |        |                                 |        |       |       | Chemotherapy<br>FF(81.3)<br>Immunotherapy<br>LY(08.1)             |   | Stomach cancer      | Treatment Effect    |
|            |   |        | ■ on . of · |        |        | no adjuvant<br>therapy S(+ (*)   |   | <b>Y</b> | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,  | ·      |  |        | ***********                     |        |       |       |   | Other cancers                           | Total (+) Vs (-)    | Treatment Effect    |
|            |   |        | ***         |        |        | no adjuvant<br>therapy Ni<br>thetero-hamo no<br>adjuvant therapy<br>Shomo netwo-k, i | <b>≨.</b>                               | i        | \$ 0000  |        | 4. **********  |        |                                 |        |       |       | no adjuvant<br>therapy Fhetero (<br>Phomo                         | Other cancers                           | Total (homo)        | Treatment Effect    |
| ••••       |   |        | N. C. F.    |        |        | no adjuvant<br>therapy Sa(68.5)  |   | 7        |  |        |  | tred   | no adjuvant<br>therapy AS(73.7) |        |       |       | no adjuvent<br>therapy F1(75)<br>YY(75)                           | *************************************** | Other cancers       | Treatment Effect    |

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|        | *************************************** | ***************************************  | ***************************************      | *************************************** | *************************************** |                     |
|--------|---|--|--|---|---|---------------------|
|        |   | DO   | ದ್ದ  | DQ                                      | B                                       | ದ್ದ                 |
| *****  |   | Cancer in  | Category                                     | Metastases                              | Alcohol                                 | Smoking             |
|        |   | Family   |  |   |   |                     |
| B      | Diversity                               |  | N. N. C. |   | ******                                  |                     |
| aqp_27 | AS                                      |  | ·····  | //····                                  |   |                     |
| aqp 21 | G                                       |  |  |   |   |                     |
| aqp 10 | AS                                      |  |  |   |   |                     |
| aqp 9  | <b>X</b>                                |  |  |   |   |                     |
| aqp 6  | 2                                       |  |  |   |   |                     |
| aqp 5  | LPS                                     |  | 300000000000000000000000000000000000000      | *************************************** |   |                     |
| aqp_4  |   |  |  |   |   |                     |
| aqp_3  | PS                                      |  |  | **                                      |   |                     |
| aqp9   | ΈΥ                                      |  | **************************************       | *****                                   |   | 14 <b>≟ 4</b> . A € |
| aqp13  | ΑĞ                                      |  |  |   |   |                     |
| aqp14  | S                                       |  |  | LL 100,                                 |   |                     |
| ;      |   |  |  | LM23.20                                 | *****                                   |                     |
| aqp23  | 5                                       |  | . 62 \ \ \ \                                 |   |   |                     |
| aqp26  | GLΥ                                     |  |  |   |   |                     |
| aqp28  | 2                                       | e de la companya del la companya de la companya del la companya de |  |   |   |                     |
| aqp30  | HSY                                     |  |  | #                                       |   |                     |
| agp37  | ם<br>א                                  |  |  |   |   | **                  |

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| aqp86               | aqp85        | aqp84              | aqp77      | aqp75 | aqp74 | agp71 | aqp70 | aqp67 | aqp66 | aqp57 | aqp56 | aqp55      | aqp53              | aqp52 | aqp47 | aqp46      | aqp45             | aqp38 | B               |                  |  |
|---------------------|--------------|--------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--------------------|-------|-------|------------|-------------------|-------|-----------------|------------------|--|
| AEG                 | LV           | EQ                 | 77         | Z     | AES   | ADKT  | EGR   | V     | R     | ADSV  | 5     | LPR        | ۵                  | LPS   | FΥ    | ΕV         | EG                | AV    | Diversity       |                  | out to the second of the secon |
|                     | LV26.4, VV12 | EQ26.4<br>EE12.5.0 |            |       |       |       |       |       |       |       |       | PR297 LR00 | LQ26.4<br>QQ12.5 Q |       |       |            | EE50, GG19.4<br>O |       | · - • • · · · · | Cancer in Family | DØ   |
| GG94.4,<br>EG82.8.0 | 5            |                    |            |       |       |       |       |       |       |       |       | O          |                    |       |       | . 60 \ \ \ | **                |       |                 | Category         | 8  |
|                     |              |                    | RR100 RT22 |       |       | #     |       |       |       |       |       |            |                    |       |       |            |                   |       |                 | Metastases       | DO   |
|                     |              |                    | G          |       |       |       |       |       |       |       |       |            |                    |       | .,    | *****      | AV24 1<br>VV15 60 | #     |                 | Alcohol          | DQ   |
|                     |              |                    |            |       |       |       |       |       |       |       |       |            |                    |       |       |            |                   | #     |                 | Smoking          | S  |

| Fig. 75 |              |                  |          |  |   |  |
|---------|--------------|------------------|----------|--|---|--|
|         |              | DQ               | DQ       | DQ   | DΩ                                      | DQ   |
|         |              | Cancer in Family | Category | Metastases                                   | Alcohol                                 | Smoking  |
| DΩ      | Diversity    |                  |          | 42   |   |  |
| aqp87   | FLY          |                  |          | YY50, LL200                                  |   |  |
| aqp89   | GT           | GT26.4, GG12.5   |          | ~*****                                       |   | ,,,,,,,  |
| aqp90   |              | IT26.4, II12.5   |          |  |   |  |
| aqp166  | 7            | *****            |          | 11100, IV23.2                                |   | 22 mg  |
| aqp125  | AGS          |                  |          | SS100, AA20                                  |   | and the second   |
|         |              |                  |          | 0  |   |  |
| aqp126  | 퓽            |                  |          |  |   | .,   |
| aqp130  | 윢            |                  | #        |  |   |  |
| aqp140  | AT           | AT26.8, AA12.2 O |          | , <b>,</b> , , , , , , , , , , , , , , , , , |   |  |
| aqp167  | 表            |                  |          |  |   |  |
| aqp182  | NS.          | NS26.8, SS12.2 O |          |  |   |  |
| aqp158  |              |                  |          |  |   |  |
| aqp197  | S            | S                |          | *  | X.2-X.C+X.                              | DI66.7<br>DD39.10  |
| aqp203  | 7            | **               |          | VV32, II22.2                                 |   |  |
| aqp220  | 돐            | HR26.4, RR12.5 O |          |  |   | , , .  |
| aqp221  | HO           | HQ26.4, QQ12.5 O |          |  |   |  |
| aqp224  | Я            |                  |          | RR100,<br>QR23.2 O                           |   |  |
|         |              |                  |          |  | *************************************** | respectives constructed and an artist of the construction of the c |
|         | All survived |                  |          |  |   |  |

| 02  | ජි | 78                               | 72   | 69                   | 58  |  | 57                             | 00                   |  | 34                   | 28            | 26  | <b>3</b>    | <b>~</b> | ដ  | 4  | -16       | Nucleic<br>Acid     | ***************************************                  | DR                                    |
|---|----|----------------------------------|--|----------------------|---|--|--------------------------------|----------------------|--|----------------------|---------------|-----|-------------|----------|--|--|-----------|---------------------|--|---------------------------------------|
| ,   |    | <br>                             | On On  |                      | on on   | ***************************************            | ~4                             |                      |  | ಬ                    |               | en. | 2           | e.s      | Ċħ   | 3  | 0         | No. of<br>Diversity |  |                                       |
|   |    |                                  |  |                      |   | ,,,  | *******                        |                      |  |                      | 20.44.2       |     |             |          | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,          |  |           | Total               | ***************************************                  | otal                                  |
| en jue come come come come come come come com   |    |                                  | 10801080×  |                      |   |  |                                |                      | ***************************************  |                      | hCACeGAA>     |     |             |          |  |  | aGCGaGCG> | Stomach             | enju enve enve enve enve enve enve enve env              |                                       |
| ano pour como ano ano ano ano ano ano ano ano ano an  |    |                                  |  | F . 1                | +GAGAGCC>   | dGAUdGAU   | dGACdGAU>                      |                      | ***************************************  |                      | 50 <b></b> 13 |     | S & S & 9 9 |          |  |  |           | Other cancers       | e en me en mare nume en me en me en me en me en me en me | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| essipinomennemennemennemennemennemennemenneme   |    | Chemotherapy: yUACyUAC> yUAUyUAU | no adjuvant therapy<br>rCGCrCGG>rCGGrCGU   | >***                 | no adjuvant therapy:  aGccaGcc>accduaGcU.  Chemotherapy:  aGcCuaGcU, aGcGaGcG.  aGcCaGcU>aGcGaGcU |  | *********                      |                      | ***************************************  |                      |               |     |             |          | Immunotherapy:<br>kAAAkAAA>kAAGkAAG> kAAAKAAG    | ente des entre productions de productions de productions de productions de productions de productions de la constitución de productions de la constitución de productions de la constitución de la constitu |           | Treatment Effect    | All Dases  |                                       |
| miganoumoumoumoumoumoumoumoumoumoumoumoumoumo   |    |                                  | no adjuvant therapy: rCGCrCGG>rCGGrCGU Chemotherapy: rCGGrCGU, rCGGrCGG, rCGGrCGG-rCGCrCGC | no adjuvant therapy: |   |  |                                |                      | week to the same t |                      |               |     |             |          | Immunotherapy:<br>kAAAkAAA>kAAGkAAG><br>kAAAkAAG |  |           | Treatment Effect    | Stomach Cancer   |                                       |
| consideration of the contract |    | Chemotherapy:                    |  |                      |   | Chemotherapy: aGCCaGCU>aGCCaGCU, aGCGAGCU>aGCGAGCG | dGACdGAU,<br>dGAUdGAU>dGACdGAC | no adjuvant therapy: | gCAAgCAA> gCAAgCAG   | no adjuvant therapy. |               |     |             |          | no adjuvant therapy:<br>kAAAkAAG>kAAGkAAG        |  |           | Treatment Effect    | Other cancers  |                                       |

| 217     | 206<br>6 | *************************************** | 181       | 179 | 169<br>169 | 166  | 55                                      | 145<br>145 | 117 | <br>13 | ö     | ŞÇ4      | <u> </u>  | 98  | Nucleic<br>Acid    | ***************************************                           | DR   |
|---------|----------|---|-----------|-----|------------|--|---|------------|-----|--------|-------|----------|---|---|--------------------|---|--|
| N       | 2        |   | ę.        | 2   | 2          |  | 2                                       | 2          | 2   |        | <br>N |          | , 10  | 2   | No of<br>Diversity |   | ,  |
|         |          |   |           |     |            |  |   |            |     | 5,699  | ,     | aGCAaGCA | •           | \$ 4.00<br>\$ 100<br>\$ 100 | Cotas              | earles anne anne anne anne a                                      | Total  |
|         |          |   |           |     |            |  |   |            |     | ****   |       |          |   |   | Stomach            |   | ***  |
|         |          | MAGCMAUG                                | tACAmAUG> |     |            |  | *************************************** |            |     | ••,    | ,.    |          |   | •   | Other cancers      | envisente parte entre sur esta esta esta esta esta esta esta esta | endra e victor de la calca de la calca<br>La calca de la |
|         |          |   |           |     |            | no adjuvant therapy:<br>rCGGrCGG> rCGArCGA |   |            |     |        |       | •••      |   | ***   | Treatment Effect   | All cases   |  |
|         |          |   | •••       |     |            |  |   |            |     |        |       |          |   | ***************************************   | Treatment Effect   | Stomach Cancer  | na katan na kata na kata na kata katan na katan na katan na katan na kata na kata na kata na kata na katan na<br>Ta  |
| 5-5-5-5 |          |   |           |     |            | no adjuvant t<br>rCGGrCGG,r<br>rCGArCGA    | į<br>į                                  |            |     | •      |       |          | no adjuvant therapy: vGUGvGUG, vGUAvGUG> vGUAvGUA | · · · · · · · · · · · · · · · · · · ·   | Treatment Effect   | Other cancers   | 化合物 医骨骨 医骨骨 医骨骨 医骨骨 医骨骨 医骨骨 医骨骨 医骨骨 医甲状腺 医甲状腺 医甲状腺 医甲状腺 医甲状腺 医甲状腺 医甲状腺素 医乳腺素 医乳腺素 医乳腺素 医乳腺素 医乳腺素 医乳腺素 医乳腺素 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基  |

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| DR.      |   |                              |  |            |         |
|----------|---|------------------------------|--|------------|---------|
| Nucleic  | No. of                                  | Cancer in Family             | Alcohol                                | Metastases | Smoking |
| Acid     | Diversity                               | •                            |  | 122444     | (       |
| -16      | ယ                                       |                              | 7.150                                  |            |         |
| 4        | ယ                                       |                              |  |            |         |
| 12       | თ                                       |                              |  |            |         |
| 4        | ట                                       |                              | •                                      |            |         |
| <b>3</b> | N                                       |                              |  |            |         |
| 26       | رن<br>ن                                 |                              |  |            |         |
| 28       | 4                                       |                              | eGAGeGAG(55.6),                        |            |         |
|          |   | < h~~ ¢ h                    | eGAAeGAG(0),                           | 10 mg      |         |
|          | *************************************** | ·                            | eGAAeGAA(15.7)                         |            |         |
| 34       | ω                                       |                              | , cen                                  |            |         |
| 53       | 2                                       |                              |  |            |         |
| 57       | 7                                       |                              |  |            |         |
| 58       | 6                                       |                              |  |            |         |
| 69       | ယ                                       |                              |  |            |         |
| 72       | ഗ്ദ                                     | rCGGrCGU(50),                | ************************************** |            |         |
|          | ***********                             | rCGCrCGG(40),<br>rCGCrCGC(0) |  |            |         |
| 78       | w                                       |                              |  |            |         |
| 90       | 2                                       |                              |  |            |         |
| 30       | 2                                       |                              | >                                      |            |         |

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/ 8/

| 묽               |        |                  |         |                                    |         |
|-----------------|--------|------------------|---------|------------------------------------|---------|
| Nucleic<br>Acid | No. of | Cancer in Family | Alcohol | Metastases                         | Smoking |
| on S            | 3      |                  |         | 10 (23 2)                          |         |
| n<br>a          | N      |                  |         | vGUCVGUC(33.2),<br>vGUCvGUU(23.5), |         |
| <u> </u>        | 2      |                  |         |                                    |         |
| <u>2</u>        | ယ      |                  |         |                                    |         |
| 106<br>6        | 2      |                  |         |                                    |         |
| 112             | N      |                  |         |                                    |         |
| 117             | 2      |                  |         |                                    |         |
| 145             | 2      |                  |         |                                    |         |
| 152             | 2      |                  |         |                                    |         |
| 106<br>06       | ယ      |                  |         |                                    |         |
| 169             | 2      |                  |         |                                    |         |
| 179             | N      |                  |         |                                    |         |
| 181<br>181      | w      |                  |         |                                    |         |
| 206             | N      |                  |         |                                    |         |
| 217             | N      |                  |         |                                    |         |

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| DQNP94 | DQNP93                                  | DQNP91 | DQNP78                          | 6                | DONP77   | DQNP72   | DQNP62                  | DQNP57 | DQNP49 | DQNP48 | DQNP47 | DQNP38            | DQNP35 | DQNP27                                     | DQNP25 | DQNP21                         | DQNP19 | -15                                   | -23  | -29 | Nucleic<br>Acid     |                | DR    |
|--------|---|--------|---------------------------------|------------------|----------|----------|-------------------------|--------|--------|--------|--------|-------------------|--------|--|--------|--------------------------------|--------|---------------------------------------|--|-----|---------------------|----------------|-------|
| 2      | 2                                       | 2      | 2                               | 4                | 4        | <b>∾</b> | 2                       | ග      | ယ      | 2      | w      | w                 | N      | 2  | 2      | ယ                              | 2      | 2                                     | N  |     | No. of<br>Diversity |                |       |
|        |   |        |                                 |                  | -        |          | *****                   |        | • •    |        |        |                   |        |  |        |                                |        |                                       | he. vii vii i                                    |     | Total               |                | Total |
|        | 2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |        |                                 |                  | · ·      | 19 (18)  |                         | ••••   | *****  |        |        |                   | 155-47 |  |        |                                |        |                                       | ***************************************          |     | Stomach             |                |       |
|        |   |        | VGUAVGUG, VGUGVGUG><br>VGUAVGUA | MCGIACG>IACCIACC | tACCtACG |          | nAACnAAC, nAACnAAU>nAAU |        |        |        |        | aGCAaGCG>aGCGaGCG |        |  |        | IACGIACC;<br>IACGIACG>IACCIACC |        |                                       |  |     | Other cancers       |                |       |
|        |   |        |                                 |                  |          |          | .,                      |        |        |        |        |                   |        | Immunotherapy: vGUAvGUG, vGUGVGUG>vGUAvGUA |        |                                |        |                                       |  |     | Treatment Effect    | All cases      |       |
|        |   |        |                                 |                  |          |          |                         |        |        |        |        |                   |        |  |        |                                |        | Same curve as DQ_23 pCCUpCCU>pCCCpCCC | no adjuvant therapy: pccupccu>pcccpccu, pcccpccc |     | Treatment Effect    | Stomach Cancer |       |

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| DR      |           | Total |              | To the outer |                  | die              |
|---------|-----------|-------|--------------|--|------------------|------------------|
|         |           |       |              |  | All cases        |                  |
| Nucleic | No. of    | Total | Stomach      | Other cancers  | Treatment Effect | Treatment Effect |
| Acid    | Diversity |       | *****        |  |                  |                  |
| DQNP118 | 2         |       |              |  |                  |                  |
| DQNP135 | ယ         |       |              | × + 1  |                  |                  |
| DQNP140 | 4         |       |              | ****   |                  |                  |
| DQNP147 | N         |       |              |  |                  |                  |
| DQNP150 |           |       |              |  |                  |                  |
| DQNP154 | 2         |       |              |  |                  |                  |
| DONP169 | 2         |       |              |  |                  |                  |
| DQNP191 | 2         |       |              |  |                  |                  |
| DQNP210 | 2         |       |              |  |                  |                  |
| DQNP213 | N         |       | 214.         |  |                  |                  |
| DQNP215 | 2         |       |              |  |                  |                  |
| DQNP218 | 2         |       |              |  |                  |                  |
| DQNP235 | 2         |       | ament at the |  |                  |                  |

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| DQNP94                                  | DQNP93 | DQNP91   | DQNP78 | DQNP77  | DQNP72  | DQNP62 | DQNP57 | DQNP49 | DQNP48 | DQNP47 | DQNP38                          | DQNP35 | DQNP27 | DQNP25 | DQNP 21                                   | DQNP19  | <u>.</u> ;                             | -23  | -29 | Nucleic<br>Acid     |               | 뮸      |
|---|--------|--|--------|---|---|--------|--------|--------|--------|--------|---------------------------------|--------|--------|--------|---|---|--|------|-----|---------------------|---------------|--------|
| 2                                       | 2      | 2  | 2      | 4   | 2   | 2      | 6      | ω      | 2      | ω      | ယ                               | 2      | 2      | 2      | မ   | 2   | 2                                      | 2    |     | No. of<br>Diversity |               |        |
|   |        |  |        | Chemotherapy:<br>rAGGrAGG>rAGArAGG,<br>rAGArAGA | The Same curve with DQ19 rCGGrCGG, rCGArCGG+rCGG+rCGArCGArCGA |        | •      |        |        |        | Chemotherapy: aGCAaGCG>aGCGaGCG | ••••   |        |        | no adjuvant therapy:<br>IACCtACG>tACAtACG | no adjuvant therapy:<br>nAACnAAC, nAACnAAU><br>nAAunAAu |  |      |     | Treatment Effect    | Other cancers |        |
| *************************************** |        |  |        |   |   |        |        |        |        | .,,,,, |                                 |        |        |        |   |   | ************************************** |      |     | Cancer in Family    |               |        |
|   | •••    |  |        |   | · marcone   |        |        |        |        |        |                                 |        |        | *****  |   |   |  | **** |     | Alcohol             |               | ****** |
|   |        | ICUGICUG(39.7), ICUGIUUG(26.8), IUUGIUUG(31.8) |        |   |   |        |        |        |        | 144.43 |                                 |        |        |        |   |   |  |      |     | Metastases          |               |        |
|   |        |  |        |   | rCGArCGA(39.1), rCGrCGG(59.8),<br>rCGGrCGG(54.7)              |        |        |        |        |        |                                 |        |        |        |   | nAACnAAC(54.7), nAACnAAU(59.8),<br>nAAUnAAU(39.1)       |  |      |     | Smoking             |               |        |

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| 3       | 4      |                      |   |  |  |  |
|---------|--------|----------------------|---|--|--|--|
| ****    | ****** |                      | ******                                  | ••• 20 ••  | dGAUdGAU(34,4)   |  |
| DQNP140 | 4      | no adjuvant therapy: |   | TACCIACC(50),  |  |  |
|         | ,.     | aGCCaGCC>aCGUaGCU    |   | tACCIACU(21.3),  |  |  |
|         |        | immunotherapy:       | 2                                       | tACUtACU(20.5)   |  |  |
| DQNP147 | 2      |                      |   | , consonessement of the consonessement of th | ICUCICUC(47.8),  |  |
|         |        |                      |   | :::::::::::::::::::::::::::::::::::::::  | ICUCICUU(24.5), ICUUICUU(32.1)   |  |
| DQNP150 | 2      |                      |   |  |  |  |
| DQNP154 | 2      |                      |   |  |  |  |
| DQNP169 | 2      | :                    | ******                                  |  | dGACdGAC(32.6),  |  |
|         |        |                      | os / The                                | 12. · • • • ·  | dGAUdGAU(34,4)   |  |
| DQNP191 | 2      |                      | 000000000000000000000000000000000000000 |  |  |  |
| DQNP210 | 8      |                      | y = 50, 1 = 5                           | ICUCICUC(50),  |  |  |
|         |        |                      | ****                                    | ICUGICUG(18.6).  |  |  |
| DQNP213 | 2      |                      |   |  | ICUCICUC(32.6),<br>ICUCICUU(27.1), ICUUICUU(34.4)  |  |
| DQNP215 | 2      |                      |   |  | LCUUICUU(47.8),  |  |
|         |        |                      | 1 4 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |  | ICUGICUU(24.5),<br>ICUGICUG(32.1)  |  |
| DQNP218 | 2      |                      | -                                       |  | entre source |  |
| DQNP235 | 2      |                      |   |  |  |  |

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|   | <del>,3, , , , , , , , , , , , , , , , , , ,</del> | The same of the sa |          | <del></del>  | *************************************** | ***************************************         | ***************************************                        |
|---|--|--|----------|--|---|---|--|
| DP                                      |  | Total  |          |  | :<br>:<br>}                             | •   | ·<br>•   |
|   | •  |  |          | }  | All Cases                               | Stomach   | Other cancers  |
|   | -  |  | ì        | }  | •                                       | Cancer  | }  |
| Nucleic                                 | No. of   | Total  | Stomach  | Other  | Treatment                               | Treatment                                       | Treatment  |
| Acid                                    | Diversity  | **   | 3        | cancers  | Effect                                  | Effect  | Effect   |
| 98                                      | 2  | All same with the  |          |  | :                                       |   |  |
|   | }  | survival curve   | •        | -  | •                                       |   | į.   |
| 107                                     | 2  | All same with the  |          |  | :                                       |   |  |
|   | 1  | survival curve   |          |  | •                                       |   |  |
| 118                                     | 2  | All same with the  | 2        | 3  | 3                                       |   | <b>&gt;</b>  |
|   | å  | survival curve   | Š.       | 1  | 1                                       |   |  |
| 167                                     | 2  | All same with the  | · · ·    | -  | \$0.00000000000000000000000000000000000 |   |  |
|   | į  | survival curve   |          |  |   |   |  |
| 179                                     | 2  | All same with the  | :        | :  | :                                       |   | <del>{</del>   |
|   |  | survival curve   |          |  |   |   |  |
|   |  |  |          | andrew and a series |   | \$555.000.000.000.000.000.000.000.000<br>{<br>} | An ennen ennen ennen ennen ennen ennen ennen ennen e<br>:<br>: |
| *************************************** |  | ë  |          |  | :                                       |   |  |
|   | Ì  | All NS   | <u> </u> | <u> </u>   | <u> </u>                                |   | <u></u>  |

Fig. 85

| 29  | Position | ***************************************          | Dive     | erse An       | ino Aci | <del></del>                             |         | no adjuvant<br>therapy                | Chemotherapy | Immunotherapy                                    |  |
|---|----------|--|----------|---------------|---------|---|---------|---------------------------------------|--------------|--|--|
| 28    M   | 29       | M  |          |               |         |   |         |                                       | M            | M  |  |
| 27  | 28       | 5.4  |          |               |         |   |         | M                                     |              |  | 1                                      |
| Z8  |          |  |          |               |         | •••••                                   |         | V                                     |              |  | <u> </u>                               |
| 25  | 26       | <u> </u>   |          |               |         |   |         |                                       |              | *····  | <b></b>                                |
| 24  | 25       |  |          |               |         |   |         |                                       |              |  | <del> </del>                           |
| 23   S  | -23      |  |          |               |         |   |         |                                       |              |  | <u> </u>                               |
| 222   |          |  |          |               |         |   |         |                                       |              |  | <b></b>                                |
| 21  | -23      |  |          |               |         |   |         |                                       |              |  |  |
| 18  | 22       | A  |          |               |         |   |         |                                       |              |  |  |
| 18  | _21      | Α  |          |               |         |   |         | Α                                     | A            | A  |  |
| 18  | _20      | P  |          |               |         |   |         | Р                                     | P            | P  |  |
| 18  | 19       | Q  |          |               |         |   |         |                                       | R            |  |  |
| 16  | 18       | Ŧ  |          |               |         |   |         |                                       |              |  |  |
| 16  | 17       | V  |          |               |         |   |         | V                                     | V            | V  |  |
| 115   |          | A  |          |               |         |   |         | A                                     | A            | ·  |  |
| 144   T   |          |  |          |               |         |   |         |                                       |              | ~ <del> </del>                                   |  |
| Tide  |          |  |          | •••••         |         | ·····                                   |         |                                       | <del></del>  |  | <del></del>                            |
| 112   |          |  |          |               |         |   |         | <u> </u>                              | <u> </u>     |  | <del> </del>                           |
| 111   | 13       |  |          |               |         |   |         |                                       |              | <del></del>                                      | <b>+</b>                               |
| 10  |          |  |          |               |         |   |         |                                       |              | •  |  |
| 9   | 11       |  |          |               |         |   |         |                                       |              |  | -                                      |
| B   |          |  |          |               |         |   |         |                                       |              |  |  |
| T   | 9        | ν  |          |               |         |   |         | V                                     | V            | V  |  |
| T   |          | L  |          |               |         |   |         | L                                     | L.           | L  |  |
| 6   | 7        | L  |          |               |         | *************************************** |         | L                                     | L            | L  |  |
| The content of the | 6        | Ŧ  |          |               |         | *************************************** |         |                                       |              | Т  |  |
| The second color  | 5        |  |          |               |         | ·····                                   |         |                                       | S            |  | ·                                      |
| 3   |          |  |          |               |         | ••••••                                  |         |                                       |              |  | <b>†</b>                               |
| T   |          |  |          |               |         | ••••••                                  |         |                                       |              | †  | ······································ |
| 1   G   |          |  |          |               |         |   |         |                                       |              |  | <del> </del>                           |
| 1         R         R         R         R         R         A   |          | <u> </u>   |          |               |         |   |         | ž                                     | <u> </u>     | <u> </u>   | <u> </u>                               |
| 2   |          |  |          |               |         |   |         | <u> </u>                              |              | <u> </u>   |  |
| A   |          |  |          |               |         |   |         | ĸ                                     | R            |  | ļ                                      |
| A   | 2        | <u> </u>   |          |               |         |   |         | A                                     | A            | A  |  |
| 5         E         D         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         DPF         DPS LV         DPS LV         DPF         DPS LV   |          | T  |          |               |         |   |         |                                       |              |  |  |
| 6         N         N         N         N         N         N         7         Y   |          | p  |          |               |         |   |         | P                                     | P            |  |  |
| 6         N         N         N         N         N         N         N         N         T         Y   | 5        | Ε  |          |               |         |   |         | W.                                    | E            | E  |  |
| 8         L         V         LorV         LorV         LorV           9         F         H         Y         ()         ()         ()         DP8 LV         DP8 LV         DPF           10         O         Q </td <td>6</td> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>N</td> <td>N</td> <td></td> <td></td>   | 6        | N  |          |               |         |   |         | N                                     | N            |  |  |
| 8         L         V         LorV         LorV         LorV           9         F         H         Y         ()         ()         ()         DP8 LV         DP8 LV         DPF           10         O         Q </td <td>7</td> <td>Y</td> <td></td> <td>*************</td> <td></td> <td>*********</td> <td></td> <td>Ÿ</td> <td>Ý</td> <td>Y</td> <td><u> </u></td>  | 7        | Y  |          | ************* |         | *********                               |         | Ÿ                                     | Ý            | Y  | <u> </u>                               |
| 9         F         H         Y         ()         ()         ()         DP8 LV DPF           10         Q         Q         Q         Q         Q         Q           11         G         L         Gort         G   |          | Ł.   | V        |               |         |   |         | LorV                                  | L or V       | L.or V   |  |
| DPF   DPF |          |  | Ĥ        | У             |         |   |         |                                       |              |  | DP8 LV and                             |
| 10  |          | ľ  |          | ,             |         |   |         | · · · · · · · · · · · · · · · · · · · | V            | · ·  |  |
| 11  | 10       |  |          |               |         |   |         |                                       | <u> </u>     | <u> </u>   | <u> </u>                               |
| 12  |          | <u>~</u>   | <b></b>  |               |         |   |         |                                       |              |  | <del> </del>                           |
| 13  | 10       |  |          |               |         |   |         |                                       | 9012         | GUIL   | <b>†</b>                               |
| 15  |          |  |          |               |         |   |         | χ                                     | <u> </u>     | <u> </u>   | <del> </del>                           |
| 15  | 13       | <u> </u>   | ļ        |               |         |   |         | <u> </u>                              | <u> </u>     | <u> </u>   | <b></b>                                |
| 17       A  | 34       | <u> </u>   |          |               |         |   |         | Ē                                     | E            | <u> </u>   | ļ                                      |
| 17       A  |          | <u> </u>   |          |               |         |   |         | C                                     | C            | C  |  |
| 19  | 16       | Y  |          |               |         |   |         | Y                                     | Y            |  |  |
| 19  | 17       | A  |          |               |         |   |         | A                                     | A            | A  |  |
| 19  | 18       | F  |          |               |         |   |         | F                                     | F            | F  |  |
| 21         T  | 19       | N  |          |               |         | *************************************** |         | N                                     | N            | N  | 1                                      |
| 21         T  | 20       | G  |          |               |         | ······································  |         | G                                     | Ğ            | G  | 1                                      |
| 23   R     R   R   R   R  | 21       | Ť  |          |               |         | ······                                  | <b></b> | 7                                     | Ť            | 7  | <del></del>                            |
| 23   R     R   R   R   R  | 27       | <del>                                     </del> |          |               |         |   |         | <u> </u>                              | <u> </u>     | <del>                                     </del> | <del> </del>                           |
| 25   L   L   L   L   L   L   L   L   L  | 44       | <u>~</u>   | <b> </b> |               |         | <b></b>                                 |         | <u> </u>                              | <u> </u>     | <u> </u>   | <del> </del>                           |
| 25   L   L   L   L   L   L   L   L   L  | 23       | <u> </u>   |          |               |         |   |         | <u> </u>                              | <u> </u>     | <u> </u>   | ļ                                      |
| 25   L   L   L   L   L   L   L   L   L  | 24       |  |          |               |         |   |         | <u> </u>                              | ļ            | ļ  | ļ                                      |
| 26   E           E   E   E   E     E       E  | 25       | L.   | ļ        |               |         |   |         | <u> </u>                              | <u> </u>     | <u> </u>   | 1                                      |
|   | 26       | E  | L        |               |         |   |         | E                                     | <u>E</u>     | <u>E</u>   |  |
|   | 27       | R  |          |               |         |   |         | R                                     | R            | R  |  |
| 28 Y Y Y Y Y Y  | 28       | Y  |          |               |         |   |         | Y                                     | Y            | Y  |  |

Fig. 86

| Position |              | Di       | verse A  | mino Ad | ild                                     | *********   | no<br>adjuvant<br>therapy              | Chemotherapy                           | Immunotherapy                          |       |
|----------|--------------|----------|----------|---------|---|-------------|--|--|--|-------|
| 29       | 1            | [        | ·        |         |   | F           | 1                                      | <b>1</b>                               | }                                      |       |
| 30       | Ÿ            |          |          |         |   |             | Y                                      | Υ                                      | Y                                      |       |
| 31       | N            |          |          |         |   |             | N                                      | N                                      | N                                      |       |
| 32       | R            |          |          |         |   |             |  | R                                      | R                                      |       |
| 33       | E            |          |          |         |   |             | R<br>6                                 | R<br>E                                 | R<br>E                                 |       |
| 34       | Ē            |          |          |         |   |             | E.                                     | Ē                                      | Ē                                      |       |
| 35       | E            | L        | Y        |         |   |             | ()                                     | ()                                     | <u>~</u>                               |       |
| 36       | Ā            | V        | ·····    |         |   | ·····       | A or V                                 | A or V                                 | ÄV                                     |       |
| 37       | Ŕ            |          |          |         |   |             | Ř                                      | Ř                                      | Ř                                      |       |
| 38       | <del></del>  |          |          |         |   |             | F                                      | F                                      | F                                      |       |
| 39       |              |          |          |         |   | ·····       | ······································ |  | ······································ |       |
| 40       | D<br>S<br>D  |          |          |         |   |             | Ω<br>%<br>Ω                            | D<br>S<br>D                            | D<br>S<br>D                            |       |
| 41       | <u></u>      |          |          |         |   |             | <u> </u>                               | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | <u> </u>                               |       |
| 42       | V            |          |          |         |   |             | v                                      | V                                      | Ÿ                                      |       |
| 43       | Ğ            |          |          |         |   |             | Ğ                                      | Ğ                                      | Ğ                                      |       |
| 44       | <u> </u>     | ļ        | <b> </b> |         |   | <del></del> |  | - <del>U</del>                         |  |       |
| 45       | E<br>F       |          | <b></b>  |         |   |             | £                                      | E<br>F                                 | E<br>F                                 |       |
|          |              |          |          |         |   |             |  |  |  |       |
| 46       | R            |          |          |         |   |             | R                                      | Ŗ                                      | R                                      |       |
| 47       | A<br>V       |          |          |         |   |             | A                                      | A                                      | A                                      |       |
| 48       |              |          |          |         |   |             | V                                      | V                                      | V                                      |       |
| 49       | Ť            |          |          |         |   |             | Ť                                      | Ť                                      | Ť                                      |       |
| 50       | E            |          |          |         |   |             | w.                                     | 171                                    | E                                      |       |
| 51       | L            |          |          |         |   |             | ш.                                     | L                                      | L                                      |       |
| 52       | G            |          |          |         |   |             | G                                      | G                                      | G                                      |       |
| 53       | R            |          |          |         |   |             | Ŕ                                      | R                                      | Ŕ                                      |       |
| 54       | Р            |          |          |         |   |             | ρ                                      | P                                      | ρ                                      |       |
| 55       | Α            | D        | Ε        |         |   |             | AD                                     | ()                                     | ()                                     |       |
| 56       | A<br>D       | E        |          |         |   |             | ()                                     | ()<br>DE                               | ()                                     |       |
| 57       |              | Ε        |          |         |   |             | <del></del> \$                         | DE                                     | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \  |       |
| 58       | Y            |          |          |         |   |             |  | Y                                      |  |       |
| 59       | W            |          |          |         |   |             | W                                      | W                                      | W                                      |       |
| 60       | N            |          |          |         |   |             | Z                                      | N                                      | N                                      |       |
| 61       | S            |          |          |         |   |             | \$                                     | S<br>Q                                 | S                                      |       |
| 62       | Q            |          |          |         |   |             | Q                                      | Q                                      | Q                                      |       |
| 63       | К            |          |          |         |   |             | K<br>D                                 | К<br>D                                 | <u>к</u><br>В                          |       |
| 64       | D            |          |          |         |   |             | D                                      | D                                      | D                                      |       |
| 65       | F            | 1        | L        |         |   |             | IL.                                    | l or L                                 | lort                                   |       |
| 66       | L            |          |          |         |   |             | L                                      | l.                                     | L                                      |       |
| 67       | Ē            |          |          |         |   |             | E                                      | E                                      | E                                      |       |
| 68       | E            |          |          |         |   |             | æ                                      | Ē                                      | E                                      |       |
| 69       | E            | K        |          |         |   |             | EK                                     | E or K                                 | E or K                                 |       |
| 69<br>70 | E<br>R       |          |          |         |   |             | R                                      | R                                      | R                                      |       |
| 71       | Α            |          |          |         |   |             | А                                      | Α                                      | A                                      |       |
| 72       | V            |          |          |         |   |             | V                                      | V                                      | V                                      |       |
| 73       | p            |          |          |         |   |             | > 0.                                   | ,<br>q                                 | p                                      |       |
| 73<br>74 | Ď            | ·        | <b></b>  |         |   |             | Ď                                      | Ď                                      | 'n                                     | ·     |
| 75       | <del>~</del> | ·        | <b></b>  |         |   |             | Ř                                      | R                                      | D<br>R                                 | ·     |
| 76       | R            | M        |          |         |   |             | R<br>○<br>C<br>R                       | R 0 0 0 R                              | IM                                     |       |
| 77       | Ċ            | ·····    | <b></b>  |         | *************************************** |             | ~~~~~                                  | <del>'</del>                           | <u>C.</u>                              |       |
| 78       | C<br>R       | ·····    | <b></b>  |         | *************************************** | ······      | ë .                                    | Ř                                      | C<br>R                                 | ····· |
| 79       | Н            |          |          |         |   |             | H                                      | H                                      | H                                      |       |
| 80       | N            |          | <b></b>  |         |   | <del></del> | N N                                    | N N                                    | N                                      |       |
| 81       | Y            | <b></b>  | <b></b>  |         |   | <b></b>     | Y                                      | 53 <b>4</b>                            | , A                                    | -     |
| 82       | E            |          | <b></b>  |         |   | <b></b>     | ~ iiii                                 | ><br>W                                 | E                                      |       |
| 83       | L<br>L       | <b></b>  |          |         |   |             |  | E.                                     |  |       |
|          | D            | <u> </u> |          |         |   |             | L                                      | n.^                                    | <u> </u>                               |       |
| 84       | <u> </u>     | G<br>G   |          |         |   | <b></b>     | <u> </u>                               | DG<br>FA                               | <u> </u>                               |       |
| 85       | E            | G        | <b>.</b> | l       |   | E           | Ω                                      | EG                                     | ()                                     | 1     |

Fig. 87

| Position     |            | Di          | verse A      | mino Ad | oid     |              | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy                           |                      |
|--------------|------------|-------------|--------------|---------|---------|--------------|---------------------------|--------------|---|----------------------|
| 86           | A          | P           | ·····        | ·       | r       | F            |                           |              | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | <del></del>          |
| 87           |            | <del></del> |              |         |         |              | <u> </u>                  | ()<br>MV     | <u> </u>                                |                      |
|              |            | <u>v</u>    |              |         |         | <del></del>  | 0                         |              | <u> </u>                                |                      |
| 88           | Ţ          |             | ļ            |         |         |              | •                         | Ţ            | T                                       | <b></b>              |
| 89           | L          |             |              |         |         |              | <u>L</u>                  | ř.           | <u> </u>                                |                      |
| 90           | Q          |             | ļ            |         |         |              | Q                         | Q            | Q                                       |                      |
| 91           | R          |             |              |         |         |              | R<br>R                    | R<br>R       | R<br>R                                  |                      |
| 92           | R          |             |              |         |         |              |                           |              |   |                      |
| 93           | ٧          |             |              |         |         |              | V                         | V            | V                                       |                      |
| 94           | Q          |             |              |         |         |              | Q                         | Q            | Q                                       |                      |
| 95           | ρ          |             |              |         |         |              | P                         | P            | P                                       |                      |
| 96           | K          | R           |              |         |         |              | 0                         | ()           | ()                                      |                      |
| 97           | V          |             |              |         |         |              | Ÿ                         | Ÿ            | Ϋ́                                      |                      |
| 98           | N          |             |              |         |         |              | N                         | N            | N N                                     |                      |
| 99           | V          |             |              |         |         | <del></del>  | ÿ                         | Ÿ            | Ÿ                                       | <del></del>          |
| 100          | S          |             |              |         |         | <b>!</b>     | ŝ                         | Š            | Š                                       | +                    |
| 101          | P          | <del></del> | <del> </del> |         |         | <del> </del> | P                         | P            | p<br>P                                  | +                    |
|              | S          | ļ           | <b></b>      |         |         | <b></b>      |                           | S S          | s s                                     |                      |
| 102          | ********** | ļ           | <b> </b>     |         | ļ       | <b></b>      | S                         |              |   | <del></del>          |
| 103          | К          |             | ļ            | ļ       |         | ļ            | <u>K</u>                  | Ķ            | K                                       |                      |
| 104          | K          |             |              |         |         |              | K                         | K            | K                                       |                      |
| 105          | G          |             |              |         |         |              | G                         | G            | G                                       |                      |
| 106          | P          |             |              |         |         |              | ρ                         | þ            | P                                       |                      |
| 107          | ٦          |             |              |         |         |              | L                         |              | l,                                      |                      |
| 108          | O          |             |              |         |         |              | a                         | Q            | Q                                       |                      |
| 109          | Н          |             |              |         |         |              | Н                         | Н            | H                                       |                      |
| 110          | Н          |             |              |         |         |              | н                         | Н            | H                                       |                      |
| 111          | N          |             |              |         |         |              | N                         | N            | N                                       |                      |
| 112          | L          |             | ·            |         |         | ·····        | Ĺ                         | Ĺ            | L.                                      |                      |
| 113          | ī.         |             |              |         |         | ·            | ī.                        | L.           | <u> </u>                                |                      |
| 114          | Ÿ          |             | <b></b>      |         |         | <b></b>      | ├──Ÿ~~~                   | Ÿ            | Ž                                       |                      |
| 115          | Č          |             | <b></b>      |         |         | <b></b>      | č                         | Č            | č                                       |                      |
|              |            |             | ļ            |         |         |              |                           |              |   |                      |
| 116          | H          |             | ļ            |         |         | ļ            | H                         | H            | Н                                       |                      |
| 117          | V          |             | ļ            |         |         | ļ            | Ž.                        | V            | V                                       |                      |
| 118          | Ţ          |             |              |         |         |              | Ţ                         | Ţ            | Ť                                       |                      |
| 119          | D          |             | ļ            |         |         |              | D                         | D            | Ö                                       |                      |
| 120          | ¥          |             |              |         |         |              | F                         | F            | F                                       |                      |
| 121          | Y          |             |              |         |         |              | Y                         | Ŷ            | Ŷ                                       |                      |
| 122          | P          |             |              |         |         |              | P                         | D.           | P                                       |                      |
| 123          | G          |             |              |         |         |              | G                         | G            | G                                       |                      |
| 124          | S          |             |              |         |         |              | S                         | S            | 5                                       |                      |
| 125          | 1          |             |              |         |         | T            | 1                         |              |   | 1                    |
| 126          |            |             |              |         |         | ļ            | á                         |              | Ö                                       |                      |
| 127          | Q<br>V     |             | <b></b>      |         |         |              | Q<br>V                    | Q<br>V       | <u>Q</u>                                | 1                    |
| 128          | Ř          |             | <b></b>      |         |         | ·            | Ř                         | Ř            | Ř                                       | +                    |
| 129          | W          |             | <del> </del> |         |         | <del> </del> | ŵ                         | Ŵ            | Ŵ                                       | +                    |
| ************ |            |             | <b></b>      |         |         | <b></b>      | *****                     | F            |   | +                    |
| 130          | F          |             | ļ            |         |         | ļ            | F                         |              | F                                       |                      |
| 131          | <u>_</u>   | ļ           | ļ            |         |         | ļ            | <u></u>                   | <u></u>      | <u> </u>                                |                      |
| 132          | N          |             | <b></b>      | <b></b> | <b></b> | <b></b>      | N                         | Ŋ            | N                                       |                      |
| 133          | G          |             | <b></b>      | L       |         | L            | G                         | G            | G                                       |                      |
| 134          | Q          |             |              |         |         |              | Q                         | Q            | Q                                       |                      |
| 135          | E          |             |              |         |         |              | H                         | E<br>E<br>T  | E                                       |                      |
| 136          | E          |             |              |         |         |              | E                         | E            | E                                       |                      |
| 137          | E          |             |              |         |         |              | T                         | Ţ            | E<br>T                                  |                      |
| 138          | A          |             |              |         |         | <b></b>      | À                         | Á            | À                                       |                      |
| 139          | G          |             | <b>!</b>     |         |         | <b>!</b>     | G                         | Ğ            | G                                       | 1                    |
| 140          | v          |             | <b>!</b>     | <b></b> | <b></b> | <b>!</b>     | v                         | V            | ν                                       | †                    |
| 141          | Ť          | <b></b>     | <b></b>      | <b></b> | <b></b> | <del> </del> | <del>- v</del>            | v<br>V       | V V                                     | · <del> </del> ····· |
|              | <u></u>    | ļ           | <b></b>      |         |         | <b></b>      | <u> </u>                  | νν           | <u> </u>                                |                      |
| 142          | S          |             | <b></b>      | ļ       | <b></b> | ļ            | S                         | Ş            | 5                                       | ·                    |
| 143          | Ţ          |             |              | ļ       |         | ļ            |                           | Ţ            | Ţ                                       |                      |
| 144          | N          | l           | ł            | 1       | 1       | İ            | N                         | N            | N                                       | 1                    |

Fig. 88

| Position   |                | Di       | verse A | mino Ad | ild    | ************* | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy |          |
|------------|----------------|----------|---------|---------|--------|---------------|---------------------------|--------------|---------------|----------|
| 145        | L              | ·        |         |         |        | F             | L.                        | Ĺ.           | L             |          |
| 146        | 1              |          |         |         |        |               | 1                         | ······       | 1             |          |
| 147        | Ŕ              |          |         |         |        | <del></del>   | Ŕ                         | Ŕ            | Ŕ             |          |
| 148        | N              | <b></b>  |         |         |        | <del> </del>  | N                         | N            |               |          |
| 149        | G              |          |         |         |        |               | G                         | G            | N<br>G        |          |
| 150        | 8              |          |         |         |        |               | 3                         | 5            | <u> </u>      |          |
|            | Q<br>W         |          |         |         |        |               | O<br>W                    | D<br>W       | Q<br>W        |          |
| 151        |                | ļ        | ļ       |         |        | ļ             |                           |              |               |          |
| 152        | Ţ              |          |         |         |        |               | T                         | Ţ            | Ţ             |          |
| 153        | F              |          |         |         |        |               | F                         | F            | F             |          |
| 154        | Q              | ļ        |         |         |        | <b></b>       | Q                         | Q            | Q             |          |
| 155        | Į.             |          |         |         |        |               | <b>{</b>                  | ļ            | <b>{</b>      |          |
| 156        | L              |          |         |         |        |               | L                         | Ĺ            | L             |          |
| 157        | V              |          |         |         |        |               | ٧                         | V            | V             |          |
| 158        | M              |          |         |         |        |               | M                         | M            | M             |          |
| 159        | L              |          |         |         |        |               | L.                        | 1            | L             |          |
| 160        | Ē              |          |         |         |        | <del></del>   | Ē                         | E            | E             |          |
| 161        | M              | ·····    | <b></b> |         | •••••• | <del> </del>  | M                         | M            | M             |          |
| 162        | T              |          |         |         |        |               | T                         | T            | T             |          |
| 163        | <del></del>    | <b></b>  | <b></b> |         |        | <b></b>       | <del></del>               | p            | <del> </del>  |          |
| 164        | - <del>[</del> |          |         |         |        | <b></b>       | Q                         | ģ            | <u> </u>      |          |
|            | ····           | ļ        | ļ       |         |        | ļ             |                           |              |               | ļ        |
| 165        | Q              | <b> </b> | <b></b> |         |        | <b>!</b>      | Q                         | Q            | Q             |          |
| 166        | G              | ļ        |         |         |        | <b></b>       | G                         | G            | Ğ             |          |
| 167        | a              |          |         |         |        |               | D                         | D            | Ö             |          |
| 168        | У              |          |         |         |        |               | V                         | ٧            | У             |          |
| 169        | Y              |          |         |         |        |               | Y                         | Υ            | Y             |          |
| 170        | }              | Ŧ        |         |         |        |               | ()                        | ()           | ()            |          |
| 171        | С              |          |         |         |        |               | С                         | C            | С             |          |
| 172        | Q              |          |         |         |        |               | Q                         | Q            | Q             |          |
| 173        | V              |          |         |         |        |               | V                         | V            | V             |          |
| 174        | E              |          | ·       |         |        |               | E                         | E            | E             |          |
| 175        | Ĥ              | ·····    |         |         |        | ·             | H                         | H            | H             |          |
| 176        | Ť              |          |         |         |        | <b></b>       | Ť                         | Ť            | Ť             |          |
| 177        |                | <b></b>  | <b></b> |         |        | <del> </del>  | S                         |              |               |          |
|            | S              |          |         |         |        |               |                           | S            | S             |          |
| 178        | <u> </u>       | M        |         |         |        | ļ             | LM                        | <u>Q</u>     | <u>Q</u>      |          |
| 179        | D              |          |         |         |        |               | D<br>S                    | D<br>S       | D<br>S        |          |
| 160        | S              |          |         |         |        |               | S                         | 5            | 5             |          |
| 181        | P              |          |         |         |        |               | Р                         | p            | P             |          |
| 182        | V              |          |         |         |        |               | V                         | V            | V             |          |
| 183        | Ŧ              |          |         |         |        |               | Ŧ                         | Ť            | Ť             |          |
| 184        | V              |          |         |         |        |               | V                         | ٧            | V             |          |
| 185        | E              |          |         |         |        |               | Æ                         | Ε            | E             |          |
| 186        | W              |          |         |         |        |               | W                         | VV           | W             |          |
| 187        | K              |          |         |         |        |               | K                         | K            | К             |          |
| 188        | Ā              |          |         |         |        | <b></b>       | A                         | À            | Ä             |          |
| 189        | Q              | <b></b>  | <b></b> |         |        | <del> </del>  | Q                         | Q            | Q             |          |
| <b>}</b>   |                | <b></b>  | <b></b> |         |        | <b></b>       |                           |              |               |          |
| 190<br>191 | S<br>D         |          |         |         |        | ļ             | S<br>D                    | S<br>D       | S<br>D        |          |
| 127        | <u>y</u>       |          |         |         |        | ļ             | <u> </u>                  |              | <u>~</u>      |          |
| 192        | S              | ļ        | ļ       |         |        | <b>}</b>      | S                         | S<br>A       | S<br>A<br>R   |          |
| 193        | A              | ļ        |         |         |        | <b></b>       | A                         | <u> </u>     | <u> </u>      |          |
| 194        | R              |          |         |         |        |               | R                         | Ŕ            | R             |          |
| 195        | S              |          |         |         |        |               | S                         | S            | S             |          |
| 196        | К              |          |         |         |        |               | K                         | K            | К             |          |
| 197        | Ŧ              |          |         |         |        |               | T                         | Ţ            | T             |          |
| 198        | L              |          |         |         |        |               | L                         | Ĺ.           | L             |          |
| 199        | Ť              |          |         |         |        |               | Ť                         | Ť            | Ť             |          |
| 200        | Ġ              | ·····    | ·····   |         |        | <b>!</b>      | Ġ                         | Ğ            | Ğ             |          |
| 201        | A              | <b></b>  |         |         |        | <del> </del>  | <u> </u>                  | <u>3</u>     |               |          |
| 202        | <del></del>    |          |         |         |        | <b></b>       | A<br>G                    | A<br>G<br>G  | A<br>G        |          |
| 305        | ~~~            |          |         |         |        | <del></del>   | G                         | 2            | G             |          |
| 203        | G              | L        | L       | L       | L      | L             | L                         | <u> </u>     | L             | <b>!</b> |

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Fig. 89

| Position |   | Diverse / | Amino A | id | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy |  |
|----------|---|-----------|---------|----|---------------------------|--------------|---------------|--|
| 204      | F |           |         |    | ۴                         | F            | F             |  |
| 205      | V |           |         |    | V                         | V            | γ             |  |
| 206      | L |           |         |    | L                         | L            | Ł.            |  |
| 207      | G |           |         |    | G                         | G            | G             |  |
| 208      | L |           |         |    | Ł.                        | Ļ            | Ĺ.            |  |
| 209      | 1 |           |         |    | }                         | 1            | j             |  |
| 210      | 1 |           |         |    | }                         | 1            | }             |  |
| 211      | C |           |         |    | С                         | C            | С             |  |
| 212      | G |           |         |    | <br>G                     | G            | G             |  |
| 213      | V |           |         |    | V                         | V            | V             |  |
| 214      | G |           | 1       |    | G                         | G            | G             |  |
| 215      | 1 |           |         |    | <br>1                     | }            | <b>\$</b>     |  |
| 216      | F |           |         |    | F                         | ۶            | F             |  |
| 217      | M |           |         |    | M                         | M            | M             |  |
| 218      | Н |           |         |    | Н                         | Н            | Н             |  |
| 219      | R |           |         |    | R                         | R            | R             |  |
| 220      | R |           |         |    | R                         | R            | R             |  |
| 221      | S |           |         |    | S                         | S            | S             |  |
| 222      | K |           |         |    | K                         | K            | K             |  |
| 223      | K |           |         |    | K                         | K            | K             |  |
| 224      | V |           | T       |    | V                         | V            | У             |  |
| 225      | Q |           |         |    | Q                         | Q            | Q             |  |
| 226      | R |           |         |    | Ŕ                         | R            | R             |  |
| 227      | G |           |         |    | G                         | G            | G             |  |
| 228      | S |           |         |    | S                         | S            | \$            |  |
| 229      | A |           |         |    | Α                         | A            | A             |  |

"or" - expected to be the same antigen

Fig. 90

| Position        |              | Di       | verse A      | mino Acid    |  | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy                          |                            |
|-----------------|--------------|----------|--------------|--------------|--|---------------------------|--------------|--|----------------------------|
| _32             | М            |          |              |              |  | M                         | M            | M                                      | <b>†</b>                   |
| 31              | S            |          |              |              |  | M<br>S                    | M<br>S       | M<br>S                                 | <b>†</b>                   |
| 30              | w            |          |              |              |  | w                         | W            | w                                      |                            |
| _29             | ĸ            | ļ        |              |              |  | K                         | ĸ            | ĸ                                      |                            |
|                 |              |          |              |              |  |                           |              | ĸ                                      |                            |
| _28<br>_27      | K<br>A       | S        |              |              |  | ()                        | K            | ()                                     |                            |
|                 | +            |          | ļ            | ļļ           |  |                           | Ω            | +                                      |                            |
| _26             | L            |          |              |              |  | L                         | L.           | L                                      |                            |
| 25<br>24        | R            |          |              |              |  | R                         | R            | R                                      |                            |
| 24              | P            |          |              | 1            |  | 3                         |              | }                                      |                            |
| _23             | P            |          |              |              |  | P                         | p            | é                                      |                            |
| _22             | G            |          |              |              |  | G                         | G            | G                                      |                            |
| _21             | D            | G        |              |              |  | GG                        | ()           | GG                                     |                            |
| _20             |              |          |              |              |  | - L                       | Ľ            | L                                      |                            |
| 19              | R            | ·····    | ·····        | ·            |  | Ř                         | R            | Ř                                      |                            |
| _18             | A            | V        |              | ·            |  | 0                         | Ö            | ()                                     |                            |
|                 |              | <u>-</u> | <b></b>      | <del> </del> |  |                           |              |  |                            |
| <u></u>         | A            |          |              |              |  | A                         | <u>A</u>     | A                                      | ļ                          |
| 16<br>15        | T<br>V       | ļ        |              | ļl           |  | T<br>V                    | T<br>V       | Ť                                      | <b></b>                    |
| 15              | V            | L        |              |              |  |                           |              | V                                      | ļ                          |
| 14<br>13        | T<br>L       |          |              |              |  | T                         | T            | Ť                                      |                            |
| _13             | LL           |          |              |              |  | L                         | L            | L                                      |                            |
| _12             | M            |          |              |              |  | M                         | M            | M                                      |                            |
| 11              | L            |          |              |              |  | L                         | L            | L                                      |                            |
| _10             | A            | S        |              |              |  | ()                        | ()           | ()                                     | 1                          |
| 9               |              | M        |              | ·            |  | <del></del>               | ()           | ()                                     | <b>†</b>                   |
| 8               | <del> </del> |          | <b></b>      | ····         |  |                           |              | ************************************** | <b>†</b>                   |
| <del></del>     | <u></u>      |          |              |              |  | <u> </u>                  | L.           | <u> </u>                               |                            |
| 7               | S            |          |              |              |  | S                         | S            | S                                      |                            |
| -6              | S            | T        |              |              |  | TT                        | ()           | TT                                     |                            |
| _5              | L            | þ        | S            | 1            |  | ()                        | ()           | pp                                     |                            |
| 4               | L.           | V        |              |              |  | VV                        | 0            | W                                      |                            |
| 3<br>2          | A<br>E       |          |              |              |  | A<br>E                    | A<br>E       | A<br>E                                 |                            |
| 2               | E            |          |              |              |  | €                         | E            | E                                      |                            |
| 1               | G            |          |              |              |  | G                         | G            | G                                      |                            |
| 1               | Ř            |          |              |              |  | R                         | R            | R                                      |                            |
| 2               | <del>D</del> |          |              |              |  | D O                       | D            | <u> </u>                               |                            |
| 3               | P            | S        |              |              |  | SS                        | PS           | Pors                                   | <b>+</b>                   |
| ·····           |              |          | <b></b>      | ļ            |  |                           |              | r UI O                                 |                            |
| <u>4</u>        | Р            | ļ        | ļ            |              |  | Р                         | P            | P<br>E                                 |                            |
| 5               | E            |          |              |              |  | E<br>D                    | E<br>D<br>F  | E                                      |                            |
| <u>6</u><br>7   | D<br>F       |          |              |              |  | D                         | D            | D<br>F                                 |                            |
| 7               | F            |          |              |              |  | F                         |              | F                                      |                            |
| 8               | V            |          |              |              |  | V                         | V            | V                                      |                            |
| 9               | F            | L        | Ŷ            |              |  | 0                         | LY           | YY                                     | DQ3 PS is same as<br>DQ9 L |
| 10              | Q            |          |              |              |  | Q                         | Q            | Q                                      |                            |
| 11              | F            |          |              |              |  | F                         | F            | F<br>K                                 |                            |
| 12              | F            |          |              |              |  | K                         | K            | K                                      |                            |
| 13              |              | G        | <b></b>      | <u> </u> -   |  | 0                         | ÄÄ           | ĞĞ                                     | <b>†</b>                   |
| 14              | A<br>L       | M        |              | <b></b>      |  | LorM                      | L or M       | LM                                     | <del> </del>               |
| 15              | <u> </u>     | 141      | ļ            | ļ            |  |                           | F 01 191     | Fivi                                   | <del> </del>               |
| <u></u>         | C<br>Y       | <b> </b> | ļ            | ļļ           |  | C                         | C<br>Y<br>F  | C<br>Y                                 | <b>†</b>                   |
| 16              | <u> </u>     |          | L            | ļ            |  | <u>*</u>                  | <u> </u>     | <u> </u>                               |                            |
| 17              | F            |          |              |              |  | Ė                         | ļ <u></u>    | F<br>T<br>N                            |                            |
| 18              | T            |          |              |              |  | T<br>N                    | T N          | Ţ                                      |                            |
| 19              | N            |          |              |              |  | N                         | N            | N                                      |                            |
| 20              | G            |          |              |              |  | G                         | G            | G                                      |                            |
| 21              | T            |          |              |              |  | Ť                         | T            | T                                      |                            |
| 22              | T<br>E       |          |              | · · · · · ·  |  | Ť                         | T<br>E       | T<br>E                                 |                            |
| 23              | Ĺ            | R        | ·            | <b></b>      |  | LR                        | L or R       | RR                                     | <b>†</b>                   |
| <u>23</u><br>24 | V            | <u> </u> | <b></b>      | <del> </del> |  | $+$ $\overline{\forall}$  | V V          | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                            |
| <u></u>         | <del></del>  |          |              |              |  | <del></del>               | R            | Ř                                      |                            |
| 25              | R            | <b> </b> | <del> </del> | ļl           |  | R                         | <u> </u>     | , , , , , , , , , , , , , , , , , , ,  |                            |
| 26              | G            | L        | Y            |              |  | 0                         | <del>\</del> | \\                                     |                            |
| 27              | V            | 1        |              | 1            |  | V                         | l V          | 1 V                                    |                            |

Fig. 91

| Position |         | Dive     | rse A | mino    | Acid   | no adjuvant therapy | Chemotherapy                           | Immunotherapy                                    |                              |
|----------|---------|----------|-------|---------|--|---------------------|--|--|------------------------------|
| 28       | S<br>R  | T        |       |         |  | SorT                | SorT                                   | SorT   |                              |
| 29       | R       |          |       |         |  | R                   | R                                      | R  |                              |
| 30       | H       | s        | Υ     |         | <del>  -</del>                                   | нн                  | i o                                    | HY   |                              |
| 31       |         | <u>×</u> |       |         | <del> </del>                                     |                     | YY                                     | † · · · · · · · · · · · · · · · · · · ·          |                              |
|          |         |          |       |         |  | <del></del>         |  | ······································           |                              |
| 32       | Υ       |          |       |         |  |                     | Y                                      | Y.   |                              |
| 33       | N       |          |       |         |  | N                   | N                                      | N  |                              |
| 34       | R       |          |       |         |  | R E E YY            | R<br>E                                 | R  |                              |
| 35       | Ε       |          |       |         |  | E                   | E                                      | E  |                              |
| 36       | E       |          |       |         |  | E                   | E<br>DY                                | E  |                              |
| 37       | D       | 1        | Y     |         |  | YY                  | DV                                     | ()   | DQ28 ST is same as           |
| Ψ,       |         | '        | `     |         |  | . `                 | ~ .                                    | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \            | DQ371                        |
| 38       | A       | V        |       |         | <del>  -</del>                                   | A or V              | A or V                                 | A or V   | 200000                       |
| 39       | R       | Ÿ        |       |         | <del> </del>                                     |                     |  |  |                              |
|          | <u></u> |          |       | <b></b> |  | R<br>F              | R                                      | <u>R</u>   |                              |
| 40       | F       |          |       |         |  |                     | F                                      | F  |                              |
| 41       | D       |          |       |         |  | D                   | D                                      | ۵  |                              |
| 42       | \$      |          |       |         |  | S                   | S                                      | s  |                              |
| 43       | D       |          |       |         |  | D                   | D                                      | Ö  |                              |
| 44       | V       |          |       |         |  | S D V               | S<br>D<br>V                            | V  |                              |
| 45       | Ě       | G        |       |         | -  | E or G              | EG                                     | E or G   | <b></b>                      |
| 46       | Ē       | Ÿ        |       |         | <del> </del>                                     |                     |  |  | DQ28 ST is same as           |
| ·        |         |          |       |         |  | ()                  | ()                                     | 0  | DQ46VE                       |
| 47       | F       | Y        |       |         |  | ()                  | ()                                     | 0  | DQ26 ST is same as<br>DQ47FY |
| 48       | R       |          |       |         |  | R                   | R                                      | R  |                              |
| 49       | Α       |          |       |         |  | A                   | A                                      | A  |                              |
| 50       | V       |          |       |         |  | - V                 | <del>v</del>                           | <del>l v</del>                                   |                              |
|          | Ť       |          |       |         | -  | Ť                   | T                                      | Ť  | •                            |
| 51       |         |          |       |         | ļļ-  |                     | <u>-</u>                               |  | <del> </del>                 |
| 52       | L       | þ        |       |         |  | ()                  | ()                                     | 0  | DQ26 ST is same as DQ52PL    |
| 53       | L       | Q        |       |         |  | LL<br>G             | Lor Q<br>G                             | Lar Q<br>G                                       |                              |
| 54       | L<br>G  |          |       |         |  | G                   | G                                      | G  |                              |
| 55       | L       | р        | R     |         |  | PorR                | PorR                                   | PorR   | DQ28 ST is same as<br>DQ55L  |
| 56       | L       | P        |       |         |  | LP.                 | pp                                     | L or P   |                              |
|          | Ã       | Ö        | S     | V       | <del>                                     </del> | ()                  | Ó                                      |  |                              |
| 57<br>58 |         |          | 2     | ¥       | <del> </del>                                     |                     |  | AA   |                              |
| 20       | A       |          |       |         | -  | <u> </u>            | <u>A</u>                               | A  |                              |
| 59       | E<br>Y  |          |       |         | ļ  | € 7                 | <u> </u>                               | <u> </u>   |                              |
| 60       |         |          |       |         |  |                     | E<br>Y<br>W                            | E<br>Y<br>W                                      |                              |
| 61       | W       |          |       |         |  | W                   | W                                      |  |                              |
| 62       | N       |          |       |         |  | N                   | N                                      | N  |                              |
| 63       | S       |          |       |         |  | S                   | 5                                      | S  |                              |
| 64       | Q       |          |       |         |  | Q                   |  | Q  |                              |
| 65       | ĸ       |          |       |         | <del>  -</del>                                   | Ř                   | Q<br>K                                 | † ĸ  |                              |
| 66       | D C     | Ē        |       |         | <del> </del>                                     |                     | DE                                     | ÉE   |                              |
| 67       |         | E V      |       |         | $\vdash$   |                     |  | VV EE  | -                            |
|          | 1       | Ψ        |       | <b></b> | $\vdash$   | iV                  | iv                                     | <del></del>                                      | 1                            |
| 68       | L       |          |       | ļ       | <b>  </b>  | <u></u>             | <u>L</u>                               | <u> </u>   | -                            |
| 69       | E       |          |       | L       |  | E                   | Ε                                      | E  |                              |
| 70       | Ε       | G        | R     | L       |  | <u>9</u>            | 0                                      | 1 ()   |                              |
| 71       | Α       | D        | К     | T       |  | 0                   | 0                                      | O<br>AT  |                              |
| 72       | R       |          |       | ·····   |  | Ŕ                   | Ú<br>R                                 | R  |                              |
| 73       | A       |          |       |         |  | Ä                   | Ä                                      | A  | <u> </u>                     |
| 74       | A       | Ε        | S     |         | <del> </del>                                     | ËS                  | 0                                      | ES   | <b>†</b>                     |
| 75<br>75 |         | V        | ~     |         | <del>                                     </del> | LV LV               |  | ()   |                              |
| 15       | L.      | Α        |       | ļ       | <del> </del>                                     |                     | <u>Q</u>                               | <del>1                                    </del> | <del> </del>                 |
| 76<br>77 | D<br>R  |          |       | ļ       | ļļ.  | <u>D</u>            | 0                                      | D<br>RT  | <b>1</b>                     |
| 77       | R       | Υ        |       | L       |  | <u> </u>            | 0                                      | RT   | 1                            |
| 78<br>79 | V       |          |       |         |  | V                   | <u> </u>                               | v<br>c   |                              |
|          | Ċ       | L        |       | L       | $\Box T$   | С                   | C                                      | C  | 1                            |
| 80       | R       |          |       |         |  | V<br>C<br>R         | V<br>C<br>R                            | R  |                              |
| 81       | H       |          |       |         | $\Box$   | Н                   | Н                                      | H  |                              |
| 82       | N       |          |       |         |  | Ń                   | N.                                     | Ň  | <b> </b>                     |
| 83       | Ϋ́      |          |       |         | <del>  -</del>                                   | Ÿ                   | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | + <del>'</del> Ÿ                                 | <b>†</b>                     |
|          |         | <u> </u> |       |         | <del> </del>                                     |                     |  |  | <del> </del>                 |
| 84       | E.      | Q        | ļ     | ļ       | <del> </del>                                     | QQ                  | <u>()</u>                              | ୟସ   | ļ                            |
|          | L       | V        |       | 1       | 1  | LL.                 | 0                                      | 0  | 1                            |
| 85<br>86 | Ā       | Ē        | G     |         | <del>,</del>                                     | Û                   | ()                                     | EG   | <del></del>                  |

Fig. 92

| Position |                | Di             | verse A | mino A  | old          |   | no<br>adjuvant<br>therapy | Chemotherapy                                     | Immunotherapy                                    |                        |
|----------|----------------|----------------|---------|---------|--------------|---|---------------------------|--|--|------------------------|
| 07       | F              | { <del>-</del> |         |         | 1            | J                                       |                           |  |  |                        |
| 87       | R              | L              | Y       |         | <b></b>      |   | FY<br>R                   | Q<br>R   | LY   | ·                      |
| 88       |                | T              |         |         | <b></b>      |   | TT                        | <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del> | R  | ·                      |
| 89       | G              | <u>-</u>       |         |         |              |   |                           | <u> </u>   | Ω  | ļ                      |
| 90       |                | T              |         |         |              |   | ŢŢ                        | Ω  | Ω  |                        |
| 91       |                |                |         |         |              |   | L                         | <u>.</u>   | Ļ  |                        |
| 92       | Q              |                |         |         |              |   | Q                         | Q  | Q  |                        |
| 93       | œ              |                |         |         |              |   | R                         | Ŕ  | Ŕ  |                        |
| 94       | R              |                |         |         |              |   | R                         | R  | R  |                        |
| 95       | У              |                |         |         |              |   | V                         | V  | ٧  |                        |
| 96       | E              |                |         |         |              |   | €                         | E  | E  |                        |
| 97       | p              |                |         |         |              |   | P                         | P  | P  |                        |
| 98       | <del></del>    |                |         |         |              |   | T                         | Ŧ  | T  | -                      |
| 99       | ~~~            |                | ······  |         | <del> </del> |   | Ý                         | ······································           | ······································           | ·                      |
| 100      | <del>-</del> - |                |         |         | <del> </del> |   | Ť                         | <del>`</del>                                     | Ť  | ·                      |
|          |                |                |         |         | ļ            |   | <b></b>                   |  | <b></b>  |                        |
| 101      |                |                |         |         |              |   | 1                         | 3  | <u> </u>   | <del>-</del>           |
| 102      | S              | ļ              |         | ļ       |              |   | \$                        | S  | \$   | <b></b>                |
| 103      | Ð              |                |         |         |              |   | Р                         | P  | P  |                        |
| 104      | Ø              |                |         |         |              |   | S                         | S  | \$   |                        |
| 105      | R              |                |         |         |              |   | R                         | R  | R  |                        |
| 106      | Τ              |                |         |         |              |   | Ŧ                         | Ţ  | Ť  |                        |
| 107      | E              |                |         |         | T            |   | E                         | E  | E  | T                      |
| 108      | A              |                |         |         |              |   | A                         | A  | A  |                        |
| 109      | L L            |                |         |         |              |   | L                         | L  | L L  | ·                      |
| 110      | N              |                |         |         |              |   | Ň                         | Ň  | N N  | -                      |
|          |                |                |         |         | ļ            |   | •••••                     |  | <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del> | · <del>[</del> ······· |
| 111      | H              |                | ļ       |         |              |   | H                         | Н.   | H <sub>.</sub>                                   | -                      |
| 112      | Н              |                |         |         | ļ            |   | Н                         | Н  | H  |                        |
| 113      | 7              |                |         |         |              |   | N                         | N  | N  |                        |
| 114      | L              |                |         |         |              |   | L                         | L  | <u> </u>   |                        |
| 115      | L              |                |         |         |              |   | Ĺ                         | Ļ  | L  |                        |
| 116      | }              | V              |         |         |              |   | ()                        | ()   | 37   |                        |
| 117      | C              |                |         |         |              |   | <u> </u>                  | ()<br>C  | C  |                        |
| 118      | S              |                |         |         |              |   | S                         | S  | 5  |                        |
| 119      | V              |                |         |         | -            |   | V                         | ν  | V  | ·                      |
| 120      | Ť              |                |         |         |              | *************************************** | Ť                         | Ť  | Ť  | ·                      |
| 121      | D              |                |         |         | ·····        |   | D                         | D  | D  | · ·                    |
| 122      | F              |                |         |         |              |   | F                         | F  | F  | <del> </del>           |
| 123      | Ÿ              |                |         |         |              |   | Y                         | Ÿ  | Y  | ·                      |
|          |                |                |         |         |              |   |                           |  |  |                        |
| 124      | £,             |                |         |         |              |   | Р                         | P  | P  | -                      |
| 125      | A              | Ģ              | \$      |         |              |   | GS                        | Q  | QQ   |                        |
| 126      | <u></u>        | Q              |         |         |              |   | <u>Q</u>                  | HQ   | <u> </u>   |                        |
| 127      |                |                |         |         |              |   | 1                         | }  |  |                        |
| 128      | K              |                |         |         |              |   | K                         | K  | K  |                        |
| 129      | V              |                |         |         | L            |   | ٧                         | ٧  | V  |                        |
| 130      | Q              | R              |         |         |              |   | ()                        | RR   | QR   |                        |
| 131      | W              |                |         |         |              |   | Ŵ                         | V  | W  |                        |
| 132      |                |                |         |         | <b>!</b>     |   |                           |  |  | <u> </u>               |
| 133      | F<br>R         |                |         |         | 1            |   | f<br>R                    | F<br>R   | F<br>R   | <b>†</b>               |
| 134      | N              | <b> </b>       |         |         | <del> </del> | <b></b>                                 | N N                       | N  | N N  | <del></del>            |
| 135      | a              |                |         |         | <del> </del> |   | D C                       | Ď  | D  | +                      |
|          | <del></del>    |                |         | <b></b> | <del> </del> |   | <u> </u>                  | υ<br>  | Q  | <del></del>            |
| 136      | Q              |                |         |         |              |   | Q                         | Q<br>E   | <u> </u>   | <b></b>                |
| 137      | E              |                |         | ļ       | <b></b>      |   | Ē                         | E  | E  | <b></b>                |
| 138      | E<br>T         |                |         |         | <b></b>      |   | E<br>T                    | E  | E<br>T   | <b></b>                |
| 139      |                |                |         |         |              |   | T                         | Ţ  |  |                        |
| 140      | A              | T              |         |         | 1            |   | TT                        | ()   | ()   |                        |
| 141      | G              |                |         |         |              |   | G                         | G  | G  |                        |
| 142      | V              |                |         |         | 1            |   | V                         | ٧  | V  |                        |
| 143      | Ÿ              |                |         |         | 1            | <b></b>                                 | v                         | Ý  | v  | 1                      |
| 144      | Š              | <b></b>        |         |         | <b>†</b>     |   | ŝ                         | Ś  | ŝ  | 1                      |
| 145      | Ť              |                |         |         | 1            |   | Ť                         | Ť  | Ť  | <del>-</del>           |
| 190      |                | i              | 5       |         | 1            | i                                       |                           | 5  | }  | 1                      |

Fig. 93

| Position                                     |                | Di     | verse A | mino Ad | id            |   | no<br>adjuvant<br>therany | Chemotherapy                            | lmmunotherapy |              |
|--|----------------|--------|---------|---------|---------------|---|---------------------------|---|---------------|--------------|
| 146  | p              | ·      |         | ·       | 1             |   | therapy<br>P              | P                                       | P             | <u> </u>     |
| 147  | È              |        |         |         |               |   | L                         | L .                                     | <u> </u>      | <del></del>  |
| 148  | <del>-</del>   |        |         |         |               | **********                              | ī                         | <u>-</u>                                | <u>-</u>      | <del></del>  |
| 149  | <del></del>    |        |         |         | ····          |   | <del></del>               | Ť                                       | <del>-</del>  | ·            |
| 150  |                |        |         |         |               |   |                           |   |               | +            |
|  | N              |        |         |         |               |   | N                         | Й                                       | N             |              |
| 151  | G              |        |         |         |               |   | G                         | Ğ                                       | Ģ             |              |
| 152  | D              |        |         |         |               |   | D                         | α                                       | D             |              |
| 153  | W<br>T<br>F    |        |         |         |               |   | W<br>T<br>F               | W<br>T                                  | W<br>T        |              |
| 154  | 7              |        |         |         |               |   | T                         | Ţ                                       | Ť             |              |
| 155  | E              |        |         |         |               |   | F                         | F                                       | F             |              |
| 156  | Q              |        |         |         |               |   | Q                         | Q                                       | a             |              |
| 157  | 1              |        |         |         |               |   | ı                         | }                                       |               |              |
| 158  | L              |        |         |         |               | *************************************** | Ĺ                         | L                                       | L             |              |
| 159  | V              |        |         |         |               | •••••                                   | V                         | V                                       | V             |              |
| 160  | M              |        |         |         |               | *************************************** | M                         | M                                       | M             |              |
| 161  | L.             |        |         | ļ       |               | ~~~~                                    | L.                        | Ĺ                                       | T T           | -            |
| 162  | Ē              |        |         |         | <del>  </del> |   |                           | Ē                                       |               | +            |
| 163  |                |        |         |         | <b> </b>      |   | E                         | E                                       | E             | +            |
|  | M              |        | ļ       | <b></b> |               |   | M                         | M                                       | M             | -            |
| 164  | Ţ              |        |         |         |               |   | T<br>P                    | P                                       | Ţ             |              |
| 165  | þ              |        | ļ       |         | ļ             |   |                           |   | Þ             |              |
| 166  | Q              |        |         |         | L             |   | Q                         | Q                                       | Q             |              |
| 167  | H              | R      |         |         |               |   | ()                        | HH                                      | RR            |              |
| 168  | G              |        |         |         |               |   | G                         | G                                       | G             |              |
| 169  | Đ              |        |         |         |               |   | Ð                         | D                                       | D             |              |
| 170  | V              |        |         |         |               | •••••                                   | V                         | V                                       | V             |              |
| 171  | Y              |        |         |         |               |   | Υ                         | Υ                                       | Y             |              |
| 172  | Ť              |        |         |         |               |   |                           | Ť                                       | Ť             |              |
| 173  | Ć              |        |         |         |               |   | T<br>C                    | Ċ                                       | Ċ             |              |
| 174  | H              |        |         |         |               | •••••                                   | H                         | H                                       | H             | •            |
| 175  | ,,,            |        |         |         |               |   | ,,,<br>V                  | Ÿ                                       | Ÿ             | -            |
| 176  |                |        |         |         |               |   | E                         |   |               |              |
| <b>*************************************</b> | E              |        |         |         |               | ·····                                   |                           | E                                       | E             |              |
| 177  | <u>H</u>       |        |         |         |               |   | H                         | <u>H</u>                                | <u>H</u>      |              |
| 178  | P              |        |         |         |               | *************************************** | P                         | P                                       | P             |              |
| 179  | S              |        |         |         |               |   | S                         | S                                       | 5<br>L        |              |
| 180  | L.             |        |         |         |               |   | L                         |   |               |              |
| 181  | Q              |        |         |         |               | *************************************** | Q                         | Q                                       | Q             |              |
| 182  | N<br>P         | S      |         |         |               |   | NN                        | ()<br>P                                 | <u> </u>      |              |
| 183  | þ              |        |         |         |               |   | р                         | ₽                                       | p             |              |
| 184  | ţ              |        |         |         |               |   | 1                         | }                                       | ļ             | T            |
| 185  | 1              | Ŧ      |         |         |               | **********                              | ii ii                     | TT                                      | ()            | ·            |
| 186  | V              |        |         |         |               |   | V                         | V                                       | V             |              |
| 187  | È              |        |         |         |               |   | Ē                         | E                                       | E             | ·            |
| 188  |                |        |         |         | <b> </b>      |   | w                         | Ŵ                                       | w w           | +            |
| 189  | R              |        |         |         |               | *************                           | R                         | Ŕ                                       | Ř             | <del></del>  |
|  |                |        |         | <b></b> | <b> </b>      |   |                           | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |               |              |
| 190  | A              | ļ      | ļ       | ļ       | <b> </b>      |   | A                         | A                                       | A             | <del></del>  |
| 191  | <u>Q</u><br>\$ |        |         | <b></b> | ļ             |   | Q<br>S                    | Q<br>S                                  | Q<br>S        |              |
| 192  | \$             |        |         |         |               |   | 8                         | 8                                       |               |              |
| 193  | E              |        |         |         | L             |   | ε                         | E                                       | E             |              |
| 194  | S              |        |         |         |               |   | S<br>A                    | S                                       | S<br>A<br>Q   |              |
| 195  | Α              |        |         |         |               |   | Α                         | Α                                       | A             |              |
| 196  | Q              |        |         |         |               |   | Q                         | Q                                       | Q             |              |
| 197  | N              | \$     |         |         |               |   | SS                        | NS                                      | ()            | 1            |
| 198  | K              | ······ |         |         |               | •••••                                   | K                         | K                                       | <u> </u>      | <b>†</b>     |
| 199  | М              | ·      |         |         |               | ••••••                                  | М                         | M                                       | M             | <b>†</b>     |
| 200  | L              | ļ      |         |         | ļ             |   | L.                        | L L                                     | Ĭ.            | <del> </del> |
|  | <u>e</u>       |        | <b></b> |         | <b>  </b>     |   |                           | 5 0                                     |               | <del> </del> |
| 201<br>202                                   | S<br>G         |        |         |         |               |   | <u> </u>                  | >                                       | S<br>G        | <b></b>      |
| <u> </u>                                     |                |        |         |         |               |   | S<br>G<br>()              | 8<br>0<br>0                             | <u>ું</u>     | <b>_</b>     |
| 203  | 1              | ٧      |         |         |               |   | l Ü                       | <u> </u>                                | Ď             | -            |
| 204  | G              | l      |         | l       | l             |   | G                         | G                                       | G             |              |

Fig. 94

| Position |        | Di | verse A | mino Ad | old | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy |  |
|----------|--------|----|---------|---------|-----|---------------------------|--------------|---------------|--|
| 205      | G<br>F |    |         |         |     | G<br>F                    | G            | G             |  |
| 206      | F      |    |         |         |     | F                         | ħ            | F             |  |
| 207      | V      |    |         |         |     | V                         | ٧            | V             |  |
| 208      | L      |    |         |         |     | L                         | L            | L.            |  |
| 209      | G      |    |         |         |     | G                         | G            | G             |  |
| 210      | Ĺ.     |    |         |         |     | L                         | L            | L.            |  |
| 211      | ì      |    |         |         |     | 1                         | ļ ļ          |               |  |
| 212      | F      |    |         |         |     | £                         | F            | F             |  |
| 213      | L      |    |         |         |     | Ĺ                         | L            | L             |  |
| 214      | G      |    |         |         |     | G                         | G            | G             |  |
| 215      | L.     |    |         |         |     | Ĺ.                        | L.           | L.            |  |
| 216      | G      |    |         |         |     | G                         | G            | G             |  |
| 217      | L      |    |         |         |     | Ĺ                         | L            | L             |  |
| 218      | 1      |    |         |         |     | j                         | ł            | ı             |  |
| 219      | 1      |    |         |         |     | 1                         | 1            | l             |  |
| 220      | Н      | R  |         |         |     | НН                        | ()           | ()            |  |
| 221      | Н      | Q  |         |         |     | HH                        | ()           | 0             |  |
| 222      | R      |    |         |         |     | R                         | R            | R             |  |
| 223      | S<br>Q |    |         |         |     | S                         | \$           | 8             |  |
| 224      | Q      | R  |         |         |     | ()                        | ()           | QR            |  |
| 225      | K      |    |         |         |     | K                         | K            | K             |  |
| 226      | G      |    |         |         |     | <br>G                     | G            | G             |  |
| 227      | P      |    |         |         |     | P                         | ρ            | Ρ             |  |
| 228      | Q      |    |         |         |     | Q                         | Q            | Q             |  |
| 229      | G      |    |         |         |     | G                         | G            | G             |  |
| 230      | P      |    |         |         |     | Р                         | P            | Р             |  |
| 231      | p      |    |         |         |     | P                         | P            | Р             |  |
| 232      | p      |    |         |         |     | Þ                         | p            | P             |  |
| 233      | А      |    |         |         |     | Α                         | A            | A             |  |
| 234      | G      |    |         |         |     | G                         | G            | G             |  |
| 235      | L      |    |         |         |     | Ĺ                         | L            | L             |  |
| 236      | L.     |    |         |         |     | L                         | L            | L             |  |
| 237      | H      |    |         |         |     | Н                         | Н            | H             |  |

Fig. 95

| Position | •••••••          | Di               | verse A | mino Ac      | aid                                    |   | no<br>adjuvant | Chemotherapy  | Immunotherapy                          |              |
|----------|------------------|------------------|---------|--------------|--|---|----------------|---------------|--|--------------|
|          |                  |                  |         | <del>,</del> | ······································ | <del></del>                             | therapy        |               | ······································ | <b></b>      |
| 29       | <u>M</u>         |                  |         |              |  |   | M              | M             | M                                      |              |
| 28       | V                |                  |         |              |  |   | V              | V             | <u> </u>                               |              |
| 27       | С                |                  |         |              |  |   | Ç              | C             | Ç                                      |              |
| 26       | L                |                  |         |              |  |   | Ĺ              | L             | <u>L</u>                               |              |
| _25      | K                | R                |         |              |  |   | RR             | RR            | RR                                     |              |
| _24      | F                | Ĺ                |         |              |  |   | For L<br>P     | ForL          | For L<br>P                             |              |
| _23      | Р                |                  |         |              |  |   |                | Þ             | P                                      |              |
| _22      | G                |                  |         |              |  |   | G              | G             | G                                      |              |
| _21      | G                |                  |         |              |  |   | G              | G             | G                                      |              |
| _20      | S                |                  |         |              |  |   | S              | S             | 5                                      |              |
| 19       | C                |                  |         |              |  | *************************************** | С              | C             | C                                      |              |
| 18       | M                |                  |         |              |  |   | M              | С<br>М        | C<br>M                                 |              |
| 17       | Α                | Ŧ                |         |              |  |   | AA             | AA            | AA                                     |              |
| 16       | A                | Ÿ                |         |              |  |   | Ŵ              | <del>Ŵ</del>  | AorV                                   |              |
| 15       | -C               | · · · · · ·      |         |              |  |   | Ĺ              | Ĺ             | <u> </u>                               |              |
| 14       | Ť                |                  |         |              |  |   | Ť              | Ť             | <del>``</del>                          |              |
| 13       | ~~               |                  |         |              |  |   | V              | v v           | <u>'</u>                               | <b></b>      |
|          | <u>v</u>         |                  |         | ļi           |  |   | T              | <u>v</u>      | <u>v</u>                               | <b></b>      |
| 12       | <del>~~~~~</del> |                  |         |              |  |   |                | ·····         | ·····                                  | ļ            |
| 11       | <u> </u>         |                  |         |              |  |   | L.             | <u></u>       | <u>_</u>                               |              |
| _10      | M                |                  |         | ļ            |  |   | M              | M             | M                                      |              |
| _9       | У                |                  |         |              |  |   | V              | V             | V                                      |              |
| 8        | Ļ                |                  |         |              |  |   | L              | L             | Ļ                                      |              |
| _8       | S                |                  |         |              |  |   | S              | S             | S                                      |              |
| 6        | S                |                  |         |              |  |   | S              | S             | S                                      |              |
| 5        | P                |                  |         |              |  |   | Þ              | P             | p                                      |              |
| 4        | L                |                  |         |              |  |   | L              | L             | L                                      |              |
|          | Α                |                  |         |              |  | ********                                | A              | A             | A                                      |              |
| _3<br>_2 | L.               |                  |         |              |  | •••••                                   | Ĺ              |               | L                                      |              |
| 1        | Ä                | S                |         |              |  |   | A or S         | A or S        | ĀĀ                                     |              |
| 7        | G                |                  |         |              |  |   | G              | G             | G                                      |              |
| 2        | <del>_</del>     |                  |         |              |  |   | D              | D             | <u>U</u>                               |              |
|          | Ť                |                  |         |              |  |   | T              | <del> i</del> | T T                                    |              |
| 3        |                  |                  |         |              |  |   |                | 1             |  |              |
| 4        | Q<br>P           | R                |         |              |  |   | QorR           | QorR          | QR                                     |              |
| 5        | <u> </u>         |                  |         |              |  |   | ۵.,            | р             | p                                      |              |
| ô        | R<br>F           |                  |         |              |  |   | R              | R<br>F        | R<br>F                                 |              |
| 7        |                  |                  |         |              |  |   | F              | ······        |  |              |
| 8        | L                |                  |         |              |  |   | L              | L             | L                                      |              |
| 9        | Ε                | K                | W       |              |  |   | 0              | WW            | KW                                     |              |
| 10       | E                | Q                | Y       |              |  |   | ΥY             | ()            | ()                                     |              |
| 11       | D                | G                | L       | P            | S                                      | V                                       | DS             | i)            | DP                                     |              |
| 12       | K<br>F           | G<br>T<br>G<br>K |         |              |  |   | KorT           | KorT          | KorT                                   |              |
| 13       | F                | G                | Н       | R            | S                                      | Y                                       | GH             | ()            | FS                                     |              |
| 14       | E<br>C           | К                |         |              |  |   | E or K         | E or K        | E or K                                 |              |
| 15       | G                |                  |         |              |  |   | č              | c c           | Č                                      |              |
| 16       | H                | Q                | Ÿ       |              |  |   | ()             | C<br>YY       | ()                                     |              |
| ļ        |                  |                  | <b></b> | ·····        |  |   |                |               |  | <b>†</b>     |
| 17       | F                |                  |         |              |  |   | F              | F             | F F                                    |              |
|          |                  |                  |         | ļ            |  |   | <del>-</del>   | <u>_</u>      |  |              |
| 19       | N<br>G           |                  |         | ļ            |  |   | N              | X<br>G        | N                                      | <b></b>      |
| 20       | ف                |                  |         | ļ            |  |   | G              | <u></u>       | G                                      | <b></b>      |
| 21       | T                |                  |         |              |  |   | Ţ              | 7             | T                                      |              |
| 22       | E                |                  |         |              |  |   | m.             | E             | E                                      |              |
| 23       | R                |                  |         |              |  |   | R              | R             | R                                      |              |
| 24       | V                |                  |         |              |  |   | >              | У             | γ                                      |              |
| 25       | Q                | R                |         |              |  |   | QorR           | QorR          | Q or R                                 |              |
| 26       | F                | L                | Y       |              |  |   | FL             | ()            | FL                                     |              |
| 27       | L                |                  |         |              |  | *************************************** | L              | L             | Ĺ                                      |              |
| 28       | Ď                | E                | Н       |              |  | *************************************** | ()             | ñ             | ()                                     |              |
| 29       | Ŕ                |                  | ·····   |              |  |   | ()<br>R        | <del> </del>  | Ú<br>R                                 | <b></b>      |
| 30       | <del>c</del>     | G                | Н       | L            | R                                      | Ÿ                                       | ()             | Q<br>R<br>Q   | 0                                      | <del> </del> |
| L        |                  |                  | L       |              |  |   |                |               |  | Ł            |

Fig. 96

| Position             | ···········          | Di     | verse A | mino A       | oid           |   | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy |         |
|----------------------|----------------------|--------|---------|--------------|---------------|---|---------------------------|--------------|---------------|---------|
| 31                   | <del>-</del> F       | 1      | V       | <u> </u>     | 1             | ······································  | Forl                      | Forl         | FI            |         |
| 32                   | H                    | Y      |         |              |               |   | НН                        | ()           | ()            |         |
| 33                   | H                    | N      |         |              |               |   | ()                        | Ö            | HH            |         |
| 34                   | Q                    |        |         |              |               |   | ă                         | Q            | à             |         |
| 35                   | E                    |        |         |              | <b></b>       |   | E                         | F F          | Ē             |         |
| 36                   | Ē                    |        |         |              |               |   | E E                       | £            | E             |         |
| 37                   | <del></del>          | L      | N       | S            | Y             |   | ()                        | ŁŸ           | NS            |         |
| 38                   | A                    | ī      | v       |              | ·             | •••••                                   | Ö                         | ()           | VV            |         |
| 39                   |                      |        |         |              |               | *************************************** | Ř                         | Ř            | Ř             |         |
| 40                   | R                    | Y      |         |              |               | *************************************** | ForY                      | For Y        | FF            |         |
|                      |                      |        |         | ······       | <del> </del>  | •••••                                   |                           |              |               |         |
| 41<br>42             | D<br>S               |        |         |              |               |   | D<br>S                    | D<br>S<br>D  | D<br>S<br>D   |         |
| 43                   | Ö                    |        |         |              |               |   | D                         | <u></u>      | <u> </u>      |         |
| 44                   | v                    |        |         | ļ            |               |   | v                         | Ť            | ν             |         |
| 45                   | Ğ                    |        |         |              |               |   | Ğ                         | Ğ            | Ğ             |         |
| 46                   | E                    |        |         |              |               |   | E                         | E            | E             |         |
| 47                   | <u></u>              |        |         |              |               |   | ForY                      | ForY         | ForY          |         |
| 48                   | R                    |        |         |              |               |   |                           | <u> </u>     | r Ol T        |         |
|                      | <del></del>          |        |         | <b></b>      | ļ             |   | R                         | R            | R             |         |
| 49<br>50             | <u>A</u>             |        |         | <b></b>      |               |   | A<br>V                    | <del></del>  | <u>A</u>      |         |
|                      |                      |        |         |              | ļ             |   |                           | <u></u>      | <u>V</u>      |         |
| 51                   | Ţ                    |        |         |              |               |   | Ť                         | Ţ            | Ţ             |         |
| 52                   | E                    |        |         | ļ            |               |   | E                         | E            | E             |         |
| 53                   | L                    |        |         |              |               |   | Ĺ                         | L            | L             |         |
| 54                   | C                    |        |         |              |               |   | G                         | Ğ            | G             |         |
| 55                   | R                    |        |         |              |               |   | R                         | R            | R             |         |
| 56                   | D.                   |        |         |              |               |   | P                         | p            | P             |         |
| 57                   | А                    | D      | S       | V            |               |   | AV                        | VA           | AV            |         |
| 58                   | A<br>E               | Ε      |         |              |               |   | A or E                    | A or E       | A or E        |         |
| 59                   |                      |        |         |              |               |   | E                         | Æ            | Ε             |         |
| 60                   | Ħ                    | S      | Ŷ       |              |               |   | ()                        | ΥY           | HS            |         |
| 61                   | W                    |        |         |              |               |   | W                         | W            | W             |         |
| 62                   | N                    |        |         |              |               |   | N                         | N            | N             |         |
| 63                   | S                    |        |         |              |               |   | S                         | \$           | S             |         |
| 64                   | Q                    |        |         |              |               |   | Q                         | Q            | Q             |         |
| 65                   | K                    |        |         |              |               |   | K                         | ĸ            | K<br>D        |         |
| 66                   | ۵                    |        |         |              |               |   | Đ                         | D            | Ð             |         |
| 67                   | F                    | 1      | L       |              |               |   | FF                        | FI           | FL            |         |
| 68                   | L                    |        |         |              |               |   | L                         | L.           | L             |         |
| 69                   | E                    |        |         |              |               |   | E                         | E            | E             |         |
|                      |                      | a      | R       |              |               |   | ()                        | DD           | Û.            |         |
| 71                   | Α                    | Q<br>E | R<br>K  | R            |               |   | Ä                         | A            | Ä             |         |
| 70<br>71<br>72<br>73 | D<br>A<br>R<br>A     |        |         |              |               |   | A<br>R                    | A<br>R       | A<br>R        |         |
| 73                   | A                    | G      |         |              |               |   | AA                        | A or G       | A or G        |         |
| 74                   | Á                    | Ē      | L       | Q            | R             |   | 0                         | LL           | AE            |         |
| 74<br>75             | V                    |        |         |              | <b></b>       |   | Ÿ                         | V            | V             |         |
| 76                   |                      |        |         | ·            | <b> </b>      | •••••                                   | Ď                         | - ò          | Ď             | <b></b> |
| 77                   | 20                   | Ŧ      |         | ·····        | <b> </b>      | *************************************** | NorT                      | N or T       | N or T        | <b></b> |
| 78                   | ~~ <del>```</del> ~~ | Ý      |         | <b></b>      | <b>†</b>      |   | VV                        | V or Y       | VY            |         |
| 79                   | ċ                    | ·····  | <b></b> | <b>!</b>     | <b> </b>      | *************************************** | C                         | Č            | C             |         |
| 80                   | R                    |        |         | <del> </del> | <del> </del>  | ••••••                                  | R                         | Ř            | R             |         |
| 81                   | H                    |        |         |              | <del>  </del> |   | Н                         | H            | H             |         |
| 82                   | N                    |        |         | <del> </del> | <del>  </del> |   | N                         | N N          | N N           |         |
| 83                   | Y                    |        |         | <b></b>      |               |   | Y                         | Y            | Y             |         |
| 84                   | G                    |        |         | <b>!</b>     | <del>  </del> |   | G                         | G            | Ġ             | 1       |
|                      |                      | .,     |         | <b></b>      | <b> </b>      |   |                           |              |               |         |
| 85                   | <u>A</u>             |        |         | <b>!</b>     | ļ             |   | A or V                    | A or V       | VV            |         |
| 86                   | Ğ                    |        |         | ļ            | ļ             |   | ٧٧                        | GV           | GG            |         |
| 87                   | E S                  |        |         | <b></b>      | ļ             |   | 8<br>9<br>F               | E<br>S       | E<br>S<br>F   |         |
| 88                   |                      |        |         | <b></b>      | ļ             |   | <u> </u>                  | <u> </u>     | <u> </u>      | <b></b> |
| 89                   | ¥=                   |        |         | ŧ            | 1 1           |   | 1 F                       | Ę            | 1 %           | 1       |

Fig. 97

| Position   | •              | Di          | verse A | mino A  | old  | no<br>adjuvant<br>therapy                         | Chemotherapy                          | Immunotherapy |   |
|------------|----------------|-------------|---------|---------|--|---|---------------------------------------|---------------|---|
| 90         | T              |             |         |         | <u> </u>   | T   | T                                     | Ŧ             | <b>†</b>                                      |
| 91         | V              | •••••       |         |         |  | Ť   | · · · · · · · · · · · · · · · · · · · | V             | <b></b>                                       |
| 92         | á              |             |         |         |  | á   | à                                     | á             |   |
| 93         | Ř              |             |         |         |  | Ř   | Ř                                     | Ř             |   |
| 94         | R              |             |         |         | <del> </del>                                     | R   | R                                     | R             |   |
| 95         | ,,,            |             |         |         | <del> </del>                                     |   | <del>\</del>                          | Ÿ             |   |
| 96         | Ē              | н           | Q       | Υ       | <del> </del>                                     | <del>- E</del> Q                                  | ()                                    | <u>/</u>      |   |
| 97         | p              |             |         |         |  |   | P                                     | )<br>P        |   |
|            |                |             |         |         |  |   |                                       |               |   |
| 98         | E              | K           |         |         |  | EK  | E or K                                | ΕK            |   |
| 99         | <u>V</u>       |             |         |         | ļ  | <u></u>   | <u>V</u>                              | <u> </u>      |   |
| 100        | Ť              |             |         |         |  | T   | 3                                     | T<br>V        |   |
| 101        | V<br>Y         |             |         |         |  | ٧   | T<br>V<br>Y                           | V             |   |
| 102        | Y              |             |         |         |  | Y   |                                       | Ý             |   |
| 103        | þ              |             |         |         |  | D.  | Þ                                     | P             |   |
| 104        | Α              | ß           |         |         |  | AA  | A or S                                | AK            | 0   |
| 105        | K              |             |         |         |  | K   |                                       | K             |   |
| 106        | K<br>T         |             |         |         | ·····  | Ť   | K<br>T                                | τ             | <u> </u>                                      |
| 107        | Q              |             |         |         |  | a   | Q                                     | Q             | <u> </u>                                      |
| 108        | P              |             |         |         | <b> </b>   |   | P                                     | P             | <del> </del>                                  |
| 109        | È              |             |         |         | <b> </b>   | <del>l i</del>                                    | Ĺ                                     | L L           | <b>†</b> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| 110        | ā              |             |         | ····    | <del> </del>                                     | <del> </del>                                      | Q                                     | ā             | <b>†</b>                                      |
| 111        | Н              |             |         |         | <del>  </del>                                    | <del> </del> Н                                    | H                                     | H             | <del> </del>                                  |
| 112        | Н              |             |         |         |  | H   | H                                     | Ĥ             | <b></b>                                       |
|            |                |             |         |         | <b></b>  |   |                                       |               |   |
| 113        | N              |             |         |         |  | N ,   | N                                     | N             |   |
| 114        | L              |             |         |         |  | L   | L.                                    | LL            | <b></b>                                       |
| 115        | L              |             |         |         |  | L   | L.                                    | L             |   |
| 116        |                |             |         |         |  |   | V                                     | ν             |   |
| 117        | С              |             |         |         |  | C   | С                                     | C             |   |
| 118        | S              |             |         |         |  | S   | S                                     | S             |   |
| 119        | V              |             |         |         |  | V   | V                                     | V             |   |
| 120        | Ν              | S           |         |         |  | SorN  | NN                                    | SS            |   |
| 121        | F              |             |         |         |  | F   | ۴                                     | ۴             |   |
| 122        | G              |             |         |         |  | G   | G                                     | G             |   |
| 123        | G<br>Y         |             |         |         |  | Ÿ   | G<br>Y                                | G<br>Y        | <u> </u>                                      |
| 124        | p              |             |         |         |  | P   | P                                     | P             |   |
| 125        | G              |             |         |         |  | G   | Ğ                                     | Ğ             | <b>†</b>                                      |
| 126        | Š              |             |         |         | <b></b>  | Š   | š                                     | š             | <del> </del>                                  |
| 127        | <u>-</u> -     |             |         |         | <b></b>  | <del>-                                     </del> | i i                                   | i             | <del> </del>                                  |
| 128        | Ē              |             |         |         |  |   | Ē                                     | É             | <del> </del>                                  |
|            | - <del>-</del> |             |         |         |  | E   | <u> </u>                              |               | <b></b>                                       |
| 129        | <u> </u>       |             |         |         | <b>}</b>   | V<br>R  | V                                     | V<br>R<br>W   |   |
| 130        | R<br>W         |             |         |         | <del> </del>                                     | - K   | Ř<br>W<br>F                           | χ,            |   |
| 131        | VV             |             |         |         | <b> </b>   | W<br>F  | <u> </u>                              | , W           |   |
| 132        | Ł              |             |         |         | ļ  |   |                                       |               | ļ   |
| 133        | L              | R           |         |         | ļ  | RR  | L or R                                | RR            |   |
| 134        | N              |             |         |         | 1  | N   | l N                                   | N             |   |
| 135        | G              |             |         |         |  | G   | G                                     | G             |   |
| 136        | Q              |             |         |         |  |   | G<br>Q<br>E                           | Q<br>E<br>E   |   |
| 137        | E              |             |         |         |  | E   | E                                     | E             | 1   |
| 138        | E              |             |         |         |  | Ξ Ξ   | E                                     | E             |   |
| 139        | ĸ              |             |         |         |  | Q<br>E<br>K                                       | K                                     | ĸ             | 1   |
| 140        | Â              | T           |         |         | <del>  </del>                                    | 0   | TT                                    | ()            | 1   |
| 141        | Ĝ              |             |         |         | <del>  </del>                                    | <del>                                     </del>  | G                                     | Ğ             | <del> </del>                                  |
| 142        | M              | ٧           |         |         | <del>                                     </del> | <del>                                     </del>  | MorV                                  | vv            | <b>†</b>                                      |
|            | V              | · · · · · · |         |         | <del>  </del>                                    | <del>  ```</del>                                  |                                       |               | <del> </del>                                  |
| 143        |                |             |         | <b></b> | <del>  </del>                                    |   | Ż                                     | V Y           | ļ   |
| 144        | S              |             |         |         | ļ  | S   | S                                     | S             | ļ   |
| 145        | Ţ              |             |         |         | ļ  | Ţ   | Ţ                                     | Ţ             | <b></b>                                       |
| 146        | G              |             |         |         | <b></b>  | G   | G                                     | G             | ļ   |
| 147<br>148 | L              |             |         |         |  | L   | L                                     | L L           |   |
|            |                |             |         |         | 1 1  | 1   | 3                                     | 1 1           | 1   |

Fig. 98

| Position   |               | Di       | verse A | mino Ad | oid        |   | no<br>adjuvant | Chemotherapy                                     | Immunotherapy                          |                                       |
|------------|---------------|----------|---------|---------|------------|---|----------------|--|--|---------------------------------------|
|            |               |          |         |         | ********** | <b></b>                                 | therapy        |  |  |                                       |
| 149        | Ŧ             | Q        |         |         |            |   | H or Q         | HH   | HH                                     |                                       |
| 150        | 7             |          |         |         |            |   | N              | 22   | N                                      |                                       |
| 151        | Œ             |          |         |         |            |   | G              | G  | G                                      |                                       |
| 152        | a             |          |         |         |            |   | D              | D  | D                                      |                                       |
| 153        | W             |          |         |         |            |   | W              | W  | W                                      |                                       |
| 154        | T             |          |         |         |            |   | Ŧ              | Ť  | T                                      |                                       |
| 155        | F             |          |         |         |            |   | £              | F  | F                                      |                                       |
| 156        | Q             |          |         |         |            | *************************************** | Q              | Q  | Q                                      |                                       |
| 157        | Ť             |          |         |         |            | *************************************** | Ť              | T  | T                                      |                                       |
| 158        | L             |          |         |         |            | *************************************** | L              |  | L                                      |                                       |
| 159        | V             |          |         |         |            |   | V              | ν  | V                                      |                                       |
| 160        | M             |          |         |         |            |   | M              | M  | M                                      |                                       |
| 161        | <del>ii</del> |          |         |         |            |   | i.             | L.   | L                                      |                                       |
| 162        | Ē             |          |         |         |            |   | Ē              | <u>,                                    </u>     | Ē                                      |                                       |
| 163        | Ť             |          |         |         | <b> </b>   |   | Ť              | Ť  | Ť                                      |                                       |
| 164        | <del>-</del>  | V        |         | <b></b> |            |   |                |  |  |                                       |
| 165        | <u>1</u>      | ļ        | <b></b> | <b></b> |            |   | ()<br>P        | <del>                                     </del> | <u>()</u>                              |                                       |
|            |               | R        | <b></b> | <b></b> |            |   |                |  | ************************************** |                                       |
| 166        | <u>a</u>      | <u></u>  | <b></b> | <b></b> | ļ          |   | QorR           | QorR   | RR                                     |                                       |
| 167        |               | ļ        | ļ       | <b></b> |            |   | S              | S<br>G   | Ş                                      |                                       |
| 168        | G             |          |         |         |            |   | G              | <u></u>  | G                                      |                                       |
| 169        | E             |          |         |         |            |   | ε              | E  | E                                      |                                       |
| 170        | У             |          |         |         |            |   | V              | ٧  | V                                      |                                       |
| 171        | γ             |          |         |         |            |   | Y              | Y  | Y                                      |                                       |
| 172        | T             |          |         |         |            |   | T              | Ţ  | Ţ                                      |                                       |
| 173        | C             |          |         |         |            |   | С              | Ç  | C                                      |                                       |
| 174        | Q             |          |         |         |            |   | Q              | Q  | Q                                      |                                       |
| 175        | V             |          |         |         |            |   | V              | V  | V                                      |                                       |
| 176        | E             |          |         |         |            |   | E              | E  | E                                      |                                       |
| 177        | H             |          |         |         |            | *************************************** | Н              | H  | Н                                      |                                       |
| 178        | P             |          |         |         |            |   | p              | P  | P                                      |                                       |
| 179        | S             |          |         |         |            | *************************************** | S              | S  | S                                      |                                       |
| 180        | L             | V        |         |         |            |   | LorV           | LorV   | L or V                                 |                                       |
| 181        | M             | Ť        |         |         |            |   | ()             | 0  | ()                                     |                                       |
| 182        |               |          |         |         |            |   |                | Š  | Š                                      |                                       |
| 183        | <u>s</u>      |          |         |         |            |   | \$<br>P        | S<br>P   | p                                      |                                       |
| 184        | Ĺ             |          |         |         |            |   | ì.             | Ĺ  |  |                                       |
| 185        | <del></del> - |          |         |         |            |   | Ť              | <del>-</del>                                     | Ť                                      |                                       |
| 186        | <del>`</del>  |          |         |         |            |   | ν              | <u> </u>   | Ϋ́                                     |                                       |
| 187        | E             |          |         |         |            |   | E              | E  | Ě                                      |                                       |
|            |               |          |         |         |            |   |                |  |  |                                       |
| 188<br>189 | W<br>R        | s        |         |         | ļi         |   | W<br>RR        | W  | W                                      | <del> </del>                          |
| 190        | <u>~~</u>     | 1 3      |         |         | ļi         |   | 7973           | Rors   | Rors                                   | <del> </del>                          |
|            | A<br>R        |          |         |         |            |   | A<br>R         | A<br>R   | A<br>R                                 |                                       |
| 191        | <u></u>       |          | <b></b> | <b></b> |            |   | r r            | <u>~</u>   | <u>~</u>                               |                                       |
| 192        | S             |          |         | <b></b> |            |   | S              | \$   | Ş                                      |                                       |
| 193        | Ē             | ļ        | ļ       | <b></b> | ļ          |   | E              | <u> </u>   | E                                      |                                       |
| 194        | <u> </u>      | <b> </b> | ļ       | <b></b> | ļ          |   | S<br>A         | S.   | S                                      |                                       |
| 195        | A             |          |         |         | L          |   | Α              | A  | A                                      |                                       |
| 196        | Q             |          |         |         |            |   | Q              | Q  | Q                                      |                                       |
| 197        | S             |          |         |         |            |   | S              | S  | S                                      |                                       |
| 198        | K             |          |         |         |            |   | K              | K  | K                                      |                                       |
| 199        | M             |          |         |         |            |   | M              | M  | M                                      |                                       |
| 200        | L             |          |         |         |            |   | L              | Ļ  | L                                      |                                       |
| 201        | S             |          |         |         |            |   | S              | S  | S                                      |                                       |
| 202        | G             |          |         |         |            |   | G              | G  | G                                      |                                       |
| 203        | V             |          |         |         |            |   | ٧              | ٧  | V                                      |                                       |
| 204        | Ğ             |          |         |         |            |   | Ġ              | G  | Ğ                                      | <b></b>                               |
| 205        | Ğ             | <b></b>  | <b></b> | ·····   | <b>†</b>   |   | ē              | Ġ  |  |                                       |
| 206        | G<br>F        | <b></b>  | ·····   |         | <b> </b>   |   | G<br>F         | G<br>F   | G<br>F                                 | · · · · · · · · · · · · · · · · · · · |
| 207        | Ÿ             | <b></b>  | <b></b> | ·····   | <b>†</b>   |   | - v            | Ÿ  | · · · · · · · · · · · · · · · · · · ·  | ······                                |
| ,          | . *           |          | ,       | ,       | , ,        | 1                                       |                | •  | , ,                                    |                                       |

Fig. 99

| Position |    | Di | verse A | mino A | old |       | no<br>adjuvant<br>therapy | Chemotherapy | Immunotherapy |  |
|----------|----|----|---------|--------|-----|-------|---------------------------|--------------|---------------|--|
| 208      | L  |    |         |        |     |       | L                         | L.           | L             |  |
| 209      | G  |    |         |        |     |       | G                         | G            | G             |  |
| 210      | ئد |    |         |        |     |       | Ĺ                         | L            | Ĺ             |  |
| 211      | L  |    |         |        |     |       | Ĺ                         | L            | L.            |  |
| 212      | 4  |    |         |        |     |       | F                         | ш.           | F             |  |
| 213      | L  |    |         |        |     |       | L                         | L            | L.            |  |
| 214      | Ç  |    |         |        |     |       | G                         | G            | G             |  |
| 215      | A  |    |         |        |     |       | Α                         | A            | A             |  |
| 216      | G  |    |         |        |     |       | G                         | G            | G             |  |
| 217      | L. |    |         |        |     |       | Ĺ                         | Ĺ            | L             |  |
| 218      | F  |    |         |        |     |       | F                         | F.           | F             |  |
| 219      | Į  |    |         |        |     |       | <b>{</b>                  | }            | 1             |  |
| 220      | Y  |    |         |        |     |       | Y                         | Ϋ́           | Y             |  |
| 221      | ш. |    |         |        |     |       | ۴                         | 4.           | ۴             |  |
| 222      | R  |    |         |        |     |       | R                         | R            | R             |  |
| 223      | 2  |    |         |        |     |       | N                         | N            | N             |  |
| 224      | Q  |    |         |        |     |       | Q                         | Q            | Q             |  |
| 225      | K  |    |         |        |     |       | K                         | K            | K             |  |
| 226      | G  |    |         |        |     |       | G                         | G            | G             |  |
| 227      | H  |    |         |        |     |       | Н                         | H            | H             |  |
| 228      | Ø  |    |         |        |     |       | S                         | Ø            | \$            |  |
| 229      | Œ  |    |         |        |     |       | G                         | O            | G             |  |
| 230      | L  |    |         |        |     |       | Ĺ                         | L            | L             |  |
| 231      | þ  | Q  |         |        |     |       | PorQ                      | P or Q       | QQ            |  |
| 232      | đ  |    |         |        |     |       | ρ                         | p            | p             |  |
| 233      | R  | T  |         |        |     |       | RorT                      | RorT         | RorT          |  |
| 234      | G  |    |         |        |     |       | G                         | G            | G             |  |
| 235      | F  |    |         |        |     |       | F                         | F            | F             |  |
| 236      | L  |    |         |        |     | ••••• | L                         | L            | L             |  |
| 237      | S  |    |         |        | 1   |       | S                         | S            | S             |  |

Fig. 100

| Position                               |              | Di   | verse A      | mino A       | eid          | ······································  | Amino Acid Configuration to Inhibit Metastases |
|--|--------------|--|--------------|--------------|--------------|---|--|
| _29                                    | М            |  | 1            | 1            | 1            | 1                                       | M  |
| _28                                    | M            |  |              |              |              |   | M  |
| _27                                    | V            |  |              | ·            |              |   | V  |
| 26                                     | Ĺ            |  | <del> </del> | <del> </del> | <del> </del> |   | i.   |
|  | ~            | <del> </del>                                     |              | ·            | <del> </del> |   |  |
| 25                                     | Q<br>V       | ļ  | ļ            | ļ            |              |   | <u> </u>                                       |
| _24                                    |              | ļ  | ļ            | ļ            | ]            |   |  |
| 23                                     | S            | <u> </u>   |              | <u> </u>     | 1            |   | \$   |
| _22                                    | Α            |  |              |              |              |   | Α  |
| 21                                     | Α            |  |              |              |              |   | A  |
| _20                                    | P            |  | 1            |              |              | •                                       | P  |
| 19                                     | Ŕ            | <del> </del>                                     | <del> </del> | <del> </del> | <del> </del> |   | Ŕ  |
| 18                                     | +            | ļ  | <del> </del> | ļ            | ļ            | <b></b>                                 | <del>\</del>                                   |
| ············                           |              | ļ  | ļ            | ļ            |              |   |  |
| _17                                    | Α            |  | ļ            | ļ            |              |   | V  |
| _16                                    | V<br>A       |  | L            | ļ            |              |   | Α  |
| _15                                    | L<br>T       |  |              |              |              |   | L.   |
| 14                                     | 7            |  |              |              |              |   | 1  |
| 13                                     | A            |  |              |              |              |   | A  |
| 12                                     | L            |  | †            | <del> </del> | <del> </del> | <del> </del>                            | L.   |
|  |              | ļ  | <del> </del> | <del> </del> | <del> </del> | <del> </del>                            | ***************************************        |
| 11                                     | <u>_</u>     | ļ  | ļ            | ļ            | ļ            | ļ                                       | <u>L</u>                                       |
| _10                                    | M            | ļ  | ļ            | ļ            | <b></b>      | <b></b>                                 | M  |
| 9                                      |              | L  | L            | L            |              |   | V  |
| _8                                     | L            |  |              |              |              |   | Į.   |
| 7                                      | L            |  |              |              |              |   | Į.   |
| 6                                      | T            | <b>!</b>   | <b>!</b>     | <u> </u>     | 1            |   | Ť  |
| 5                                      | ŝ            | ļ  | <del> </del> | ļ            | <del> </del> |   | \$   |
|  | V            | <b></b>  |              | ļ            | <del> </del> | <b>}</b>                                |  |
| 4                                      |              | ļ  |              | ļ            |              |   | <u> </u>                                       |
| 3                                      | V            |  |              |              | ļ            |   | V  |
| _2                                     | Q            | I  | Ĺ            | l            |              |   | Q  |
| 3                                      | G            |  |              |              |              |   | G  |
| 1                                      | R            |  | 1            | 1            |              |   | R  |
| 2                                      | A            | <del> </del>                                     | ·            | ·····        |              |   |  |
| 3                                      | <del></del>  | <b></b>  | <del> </del> | <del> </del> | <b></b>      |   | A<br>T   |
| ······································ | <del>p</del> |  | ļ            | ļ            |              |   | P  |
| 4                                      |              |  | ļ            | ļ            | ļ            |   |  |
| 5                                      | ٤            |  |              |              |              |   | E  |
| 6                                      | N            | 1  | L            |              | 1            |   | N  |
| 7                                      | À.           |  |              |              |              |   | Y  |
| 8                                      | L            | V  |              |              |              |   | ()   |
| 9                                      | F            | Н  | Ÿ            | †            |              |   |  |
| 10                                     | à            | <del> </del>                                     | <del> </del> | <del> </del> | <del> </del> | <del> </del>                            | <u>Q</u>                                       |
| ·                                      |              |  | ļ            | ļ            |              | <del> </del>                            | Q  |
| 11                                     | <u>G</u>     |  |              |              |              |   | <u>Q</u>                                       |
| 12                                     | R            | <b></b>  | <b></b>      | <b></b>      | <b></b>      | L                                       | R R  |
| 13                                     | Q            |  |              |              |              |   | Q  |
| 14                                     | Q<br>E       | 1  |              |              |              |   | Q<br>E   |
| 15                                     | C            |  |              |              |              |   | C  |
| 16                                     | Ÿ            | <del>                                     </del> |              |              | <b></b>      |   | Ÿ  |
|  |              | <b></b>  | <del> </del> | <del> </del> | <del> </del> | <del> </del>                            |  |
| 17                                     | A<br>F       |  | ļ            | ļ            | }            |   | A<br>F   |
| 18                                     |              | <b></b>  | ļ            | ļ            | <b>!</b>     | <b></b>                                 |  |
| 19                                     | N<br>G       | <b></b>  |              |              | 1            | 1                                       | N<br>G   |
| 20                                     | G            |  | L            |              | 1            | 1                                       | G  |
| 21<br>22                               | T            | 1  | 1            | 1            | 1            | 1                                       | T  |
| 22                                     | Q            |  | ·            | <u> </u>     | <b>†</b>     | *************************************** | Q  |
| 23                                     | R            | <b></b>  | <b>†</b>     | <b>†</b>     | <b>†</b>     | <b>†</b>                                | ₹  |
| 24                                     | ₹            | <del> </del>                                     | <del> </del> | <del> </del> | <del> </del> | <del> </del>                            | F  |
| 24                                     |              | <b></b>  | ļ            | <b> </b>     | ļ            | ļ                                       |  |
| 25                                     | L.           |  |              |              |              |   | <u> </u>                                       |
| 26                                     | Æ            |  |              |              |              |   | E  |
| 27                                     | R            | 1  |              | 1            |              |   | R<br>Y   |
| 28                                     | У            | 1  | T            |              |              |   | Υ  |
| 29                                     | i            |  | <b>†</b>     | <b>†</b>     | <b></b>      |   |  |
| 30                                     | Ÿ            | <b></b>  | <del> </del> | <del> </del> | <del> </del> | <del> </del>                            | Ý  |
| <u></u>                                | L            | L  | <b></b>      | <b></b>      | 1            | 1                                       | <u> </u>                                       |

Fig. 101

| Position   |             | Di       | verse A  | mino Ac  | id      |              | Amino Acid Configuration to Inhibit Metastases |
|--|-------------|----------|--|----------|---------|--------------|--|
| 31   | N           |          | T  |          | I       | 1            | N  |
| 32   | R           |          | 1  |          |         |              | R  |
| 33   | E           |          | 1  |          |         |              | E  |
| 34   | F           |          | ·  |          |         |              | E  |
| 35   | E<br>F      | L        | Y  |          |         | <b></b>      |  |
|  |             |          | Į  |          |         |              | Ő  |
| 36   | A           | V        | ļ  |          |         |              | <u>Q</u>                                       |
| 37   | R           |          | ļ  |          |         | ļ            | <u>R</u>                                       |
| 38   | F           |          |  |          |         |              | F<br>D   |
| 39   | D           |          |  |          |         |              |  |
| 40   | S           |          |  |          |         |              | S  |
| 41   | D           |          |  |          |         |              | D  |
| 42   |             |          | 1  |          |         |              | V  |
| 43   | Ġ           |          |  |          |         |              | G  |
|  |             |          |  |          |         |              | <u> </u>                                       |
| 44   | G<br>E      |          |  |          |         |              | G<br>E<br>F                                    |
| 45   |             |          | ļ  |          |         |              |  |
| 46   | R           |          | ļ  |          |         |              | R  |
| 47   | A           |          |  |          |         |              | A  |
| 48   | V           |          | L  |          |         |              | V  |
| 49   | Ţ           |          |  |          |         |              | T  |
| 50   | E           |          | I  |          | I       | 1            | E  |
| 51   | L           |          | <b>†</b>   |          |         |              | L.   |
| 52   | Ğ           |          | <del> </del>                                     |          |         | <del> </del> | Ğ  |
|  |             |          | <del> </del>                                     |          |         |              | Ř  |
| 53   | R           |          | ļ  |          |         |              | P P  |
| 54   | Р           |          |  |          |         |              | <u> </u>                                       |
| 55   | A           | D        | E  |          |         |              | AA .   |
| 56   | Α           | m m      |  |          |         |              | 0  |
| 57   | D<br>Y      | E        |  |          |         |              | <u> </u>                                       |
| 58   | Y           |          |  |          |         |              | Y  |
| 59   | W           |          | 1  |          |         |              | W  |
| 60   | N           |          |  |          |         |              | N  |
| 61   | <u></u>     |          | <del> </del>                                     |          |         | <b></b>      | \$   |
|  | S<br>Q      |          | <del> </del>                                     |          |         | <del> </del> |  |
| 62   |             |          | ļ  |          |         |              | <u>Q</u>                                       |
| 63   | K           |          | ļ  |          |         | ļ            | <u>K</u>                                       |
| 64   | D           |          |  |          |         |              | Ō  |
| 65   | F           | 1        | L  |          |         |              | ()   |
| 66   | L           |          |  |          |         |              | L.   |
| 67   | E           |          |  |          |         |              | £  |
| 68   | E<br>E      |          | 1  |          |         |              | €<br>€   |
| 69   | Ē           | K        | <b>†</b>   | <b>!</b> | <b></b> | <del> </del> | Ü.   |
| 70   | Ŕ           |          | <del> </del>                                     |          |         |              |  |
|  |             |          | <del> </del>                                     |          |         |              | 8  |
| 71   | A           |          | ļ  | ļ        |         | <b></b>      | A  |
| 72   | V           |          |  |          |         |              | V  |
| 73   | Р           |          |  |          |         |              | P  |
| 74   | D           |          |  |          |         |              | D  |
| 75   | R           |          |  |          |         |              | R  |
| 76   | 1           | M        | V  |          |         |              | 0  |
| 77   | Ċ           |          | 1  |          |         |              | Č  |
| <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del> | *******     | ·····    | <del> </del>                                     |          | ·····   | <del> </del> |  |
| 78<br>79   | R<br>H      |          | <del> </del>                                     | <b></b>  | <b></b> | <del> </del> | <u> </u>                                       |
| <u>'</u> ' <del>'</del>                          | <del></del> | ļ        | ļ  | ļ        | <b></b> | <b></b>      | ļ <u>7</u>                                     |
| 80   | N<br>Y      |          | ļ  |          |         | <b></b>      | N  |
| 81   | Y           |          | L  |          |         |              | Y  |
| 82   | E           |          |  |          |         |              | £  |
| 83   | L           |          |  |          |         |              | L  |
| 84   | ā           | G        |  |          |         | <b>!</b>     | Ö  |
| 85   | E           | G        | <del>                                     </del> |          |         | <b>†</b>     | <b>X</b>                                       |
|  | <u>~</u>    | p        | <del> </del>                                     |          |         | <b></b>      |  |
| 86<br>87   | A<br>M      | V        | <del> </del>                                     | <b>}</b> | <b></b> | <b>†</b>     | 0  |
| <u> </u>   | IN.         | <u>V</u> | ļ  |          |         | <b></b>      | )<br>T<br>E                                    |
| 88   | Ť<br>L      |          | <b></b>  |          | L       | <b></b>      | T  |
| 89   | L           |          | L  |          |         |              | L.   |
|  |             |          |  |          |         | ************ |  |

Fig. 102

| Position | 1           | Di | verse Am       | ino Acid | *************************************** | Amino Acid Configuration to Inhibit Metastases |
|----------|-------------|----|----------------|----------|---|--|
| 90       | Q           |    |                |          | 1                                       | Q  |
| 91       | Q<br>R      |    |                |          | 1                                       | R  |
| 92       | R           |    |                |          | <b></b>                                 | R  |
| 93       | Ÿ           |    | l              |          | 1                                       | V  |
| 94       | Q           |    |                |          | <del> </del>                            | Ò  |
| 95       | p           |    |                |          |   | <u>о</u><br>Р                                  |
| 96       | ĸ           | R  | ····           |          |   |  |
| 97       | -           |    | <del></del>    |          | <del> </del>                            | <u>Q</u>                                       |
|          | V           |    |                |          | ļ                                       | V  |
| 98       | N           |    |                |          |   | N  |
| 99       | V<br>S      |    | ļ              |          | ļ                                       | V  |
| 100      | S           |    |                |          |   | S  |
| 101      | P           |    |                |          | 1                                       | P  |
| 102      | S           |    |                |          |   | S  |
| 103      | P<br>S<br>K |    |                |          | 1                                       | S<br>K<br>K                                    |
| 104      | K           |    |                |          |   | К  |
| 105      | G           |    |                |          | 1                                       | G  |
| 106      | Р           |    |                |          | 1                                       | P  |
| 107      | Ĺ           |    |                |          | ·                                       | L.   |
| 108      | à           |    | <del>  -</del> |          | <del> </del>                            | à  |
| 109      | H           | ļ  | <del>  -</del> |          | <del> </del>                            | н  |
| ******   | *****       |    | ļ              |          | <b></b>                                 |  |
| 110      | 14          |    | ļ              |          | ļ                                       | H  |
| 111      | N           |    |                |          |   | N  |
| 112      | L           |    |                |          |   | <u>L</u>                                       |
| 113      | L           |    |                |          |   | L.   |
| 114      | V           |    |                |          |   | ٧  |
| 115      | C           |    |                |          |   | ¢  |
| 116      | H<br>V      |    |                |          |   | H >  |
| 117      | V           |    |                |          |   | V  |
| 118      | T           |    |                |          |   | Ť  |
| 119      | D           |    | ·              |          | <del> </del>                            | Ď  |
| 120      | F           |    | ····           |          | <del> </del>                            | F  |
| 121      | Ÿ           |    | <del> </del>   |          | <del> </del>                            | Ý  |
|          | P           |    | <b></b>        |          | ļ                                       | Þ  |
| 122      |             |    | <b></b>        |          |   |  |
| 123      | G           |    |                |          | ļ                                       | G  |
| 124      | S           |    |                |          |   | Ø  |
| 125      | - 1         |    |                |          |   | l l  |
| 126      | Q<br>V      |    |                |          | 1                                       | <u> </u>                                       |
| 127      |             |    |                |          | 1                                       |  |
| 128      | R           |    |                |          |   | R  |
| 129      | W           |    |                |          |   | W  |
| 130      | F           |    |                |          |   | F  |
| 131      |             |    |                |          | 1                                       |  |
| 132      | L<br>N      |    |                |          |   | L<br>N   |
| 133      | Ĝ           |    |                |          | <del> </del>                            | G  |
| 134      | Q           |    |                |          | <del> </del>                            | 9 0  |
|          | \w          |    | -              |          | <del> </del>                            | <del>у</del><br>Е                              |
| 135      | E           |    |                |          | ļ                                       | E E  |
| 136      | 200         |    |                |          | ļ                                       |  |
| 137      | T           |    |                |          |   | T A G  |
| 138      | A<br>G      |    |                |          | 1                                       | A  |
| 139      | G           |    |                |          |   | G  |
| 140      | V           |    |                |          |   | V  |
| 141      | V           |    |                |          | ]                                       | V  |
| 142      | S           |    |                |          | 1                                       | S  |
| 143      | Ť           |    |                |          | 1                                       | Ť  |
| 144      | Ň           |    |                |          | 1                                       | N  |
| 145      |             |    |                |          | <del> </del>                            |  |
|          | L<br>I      |    | <del> </del>   |          | <del> </del>                            | £  |
| 146      |             |    |                |          | <del> </del>                            | 1  |
| 147      | R           |    |                |          | ļ                                       | 3  |
| 148      | N           | L  | L              |          | 1                                       | N  |

Fig. 103

| Position |                         | Di      | verse A      | mino Ad | id      | ••••••                                  | Amino Acid Configuration to Inhibit Metastases |
|----------|-------------------------|---------|--------------|---------|---------|---|--|
| 149      | G                       |         |              |         |         |   | G  |
| 150      | D                       |         |              |         |         | 1                                       | D  |
| 151      | W                       |         |              |         |         | 1                                       | W  |
| 152      | T                       |         |              |         |         |   | Ť  |
| 153      | F                       |         |              |         |         | 1                                       | Ė  |
| 154      | à                       |         |              |         |         |   | Q  |
| 155      | <u></u>                 |         |              |         |         |   | <u> </u>                                       |
|          |                         |         |              |         |         | <del> </del>                            | ļ  |
| 156      | L<br>V                  |         |              |         |         | ļ                                       | L<br>V   |
| 157      |                         |         |              |         |         | <b></b>                                 |  |
| 158      | M                       |         |              |         |         |   | M  |
| 159      | L                       |         |              |         |         |   | L  |
| 160      | M<br>T<br>P             |         |              |         |         |   | E M T P  |
| 161      | M                       |         |              |         |         |   | M  |
| 162      | T                       |         |              |         |         |   | Ť  |
| 163      | P                       |         |              |         |         | <b>†</b>                                | P  |
| 164      | Q                       |         |              |         |         | <del></del>                             | Q  |
| 165      | ä                       |         | <del> </del> |         |         | <del> </del>                            | ā  |
|          |                         |         | ļ            | ļ       |         | <del> </del>                            | <u> </u>                                       |
| 166      | Ğ                       |         | ļ            |         |         | ļ                                       | G  |
| 167      | D                       |         | ļ            | ļ       |         | <b>!</b>                                | D  |
| 168      | V                       |         |              |         |         | 1                                       | V  |
| 169      | Y                       |         |              |         |         | 1                                       | Y  |
| 170      | 1                       | Ŧ       |              |         |         |   | 0  |
| 171      | C                       |         |              |         |         | 1                                       | Ċ  |
| 172      | Q                       |         |              |         |         | 1                                       | Q .  |
| 173      | V                       |         |              |         |         | <del> </del>                            | V  |
| 174      | E                       |         |              |         |         | <del> </del>                            | Æ  |
|          |                         |         |              |         |         | <del> </del>                            | <u> </u>                                       |
| 175      | H<br>T                  |         |              |         |         |   | H<br>T   |
| 176      |                         |         |              |         |         | <u> </u>                                |  |
| 177      | S                       |         |              |         |         |   | S  |
| 178      | l.                      | M       |              |         |         |   | 0  |
| 179      | D                       |         |              |         |         |   | D  |
| 180      | S                       |         |              |         |         |   | S  |
| 181      | P                       |         |              |         |         | *************************************** | P  |
| 182      | Ÿ                       |         | -            |         |         |   | V  |
|          | Ť                       |         |              |         |         | <del> </del>                            | Ť  |
| 183      |                         |         |              |         |         | <del></del>                             |  |
| 184      | V                       |         |              |         |         | <u> </u>                                | <u></u>  |
| 185      | E                       |         |              |         |         | <u> </u>                                | E  |
| 186      | W                       |         |              |         |         |   | W  |
| 187      | K                       |         |              |         |         |   | К  |
| 188      | A                       |         |              |         |         |   | A  |
| 189      | Q                       |         | 1            |         |         | 1                                       | Q  |
| 190      | <u>S</u>                | ·····   | 1            |         |         | <del> </del>                            | Š  |
| 191      | S<br>D                  |         |              |         |         | <del> </del>                            | Ď  |
|          | <del></del>             |         |              |         |         | <del> </del>                            |  |
| 192      | S                       | <b></b> | -            |         |         | <del> </del>                            | Ş  |
| 193      | A                       | ļ       | ļ            |         |         | <b>!</b>                                | A  |
| 194      | R<br>S                  |         |              |         |         |   | R  |
| 195      | S                       | L       |              |         |         |   | S  |
| 196      | K                       |         |              |         |         | 1                                       | K  |
| 197      | K<br>T                  |         |              |         |         | 1                                       | K<br>T   |
| 198      |                         |         | 1            |         |         | <del> </del>                            | L.   |
| 199      | L<br>T                  |         | 1            |         |         | <b>†</b>                                | T T  |
| 200      | G                       | ·····   | <b>†</b>     | ····    |         | <del> </del>                            | Ġ  |
| 200      | \ \frac{\alpha}{\alpha} |         |              |         |         | <del> </del>                            | <u> </u>                                       |
| 201      | A                       | ļ       | ļ            | ļ       |         | ļ                                       | A  |
| 202      | G                       |         |              |         |         | 1                                       | G  |
| 203      | G                       |         |              |         |         |   | G  |
| 204      | F                       |         |              |         |         | 1                                       | F<br>V   |
| 205      | V                       |         |              |         |         | 1                                       | ν  |
| 206      | Ĺ                       |         | 1            |         |         | 1                                       | L.   |
| 207      | Ğ                       |         | <b>†</b>     | ·····   |         | <del> </del>                            | Ğ  |
|          | L                       | <b></b> |              | <b></b> | <b></b> | 4                                       | L  |

Fig. 104

| Position |   | Diverse Amin | o Acid | Amino Acid Configuration to Inhibit Metastases |
|----------|---|--------------|--------|--|
| 208      | L |              |        | L.   |
| 209      | 1 |              |        |  |
| 210      | 1 |              |        |  |
| 211      | C |              |        | C C  |
| 212      | G |              |        | G  |
| 213      | V |              |        | V  |
| 214      | G |              |        | G  |
| 215      | 1 |              |        |  |
| 216      | F |              |        | F  |
| 217      | M |              |        | M  |
| 218      | н |              |        | Н  |
| 219      | R |              |        | R  |
| 220      | R |              |        | R  |
| 221      | S |              |        | S  |
| 222      | К |              |        | К  |
| 223      | К |              |        | К  |
| 224      | V |              |        | V  |
| 225      | Q |              |        | Q  |
| 226      | R |              |        | R  |
| 227      | G |              |        | G  |
| 228      | S |              |        | \$   |
| 229      | Α |              |        | A  |

Fig. 105

| Position |  | Di                                    | verse A                               | mino Ac      | old .   |      | Amino Acid Configuration to Inhibit Metastases |
|----------|--|---------------------------------------|---------------------------------------|--------------|---------|------|--|
| _32      | M  |                                       |                                       |              |         |      | M  |
| _31      | S  |                                       |                                       |              |         |      | \$   |
| 30       | s<br>W   |                                       |                                       |              |         |      | Ŵ  |
| 29       | K  |                                       |                                       |              |         |      | К  |
| 28       | ĸ  |                                       |                                       |              |         |      | ĸ  |
| 27       |  | S                                     |                                       |              |         |      |  |
|          | A  |                                       |                                       | ļ            |         |      | <u> </u>                                       |
| 26       | <u></u>  | ļ                                     |                                       | ļ            |         |      | L  |
| _25      | R  |                                       |                                       | <b></b>      |         |      | R  |
| _24      | 1  |                                       |                                       |              |         |      | <u> </u>                                       |
| _23      | Р  |                                       |                                       |              |         |      | P  |
| _22      | G  |                                       |                                       |              |         |      | G  |
| _21      | D  | G                                     |                                       |              |         |      | ()   |
| _20      | 1 L  |                                       |                                       |              |         |      | Ĺ  |
| 19       | R  |                                       |                                       | ······       |         |      | Ω.   |
| _18      | A  | V                                     |                                       |              |         |      | R ()   |
| _17      |  | · · · · · · · · · · · · · · · · · · · |                                       |              |         |      | <u> </u>                                       |
| ·        | Ą  |                                       |                                       |              |         |      | A<br>T   |
| _16      | Ţ  |                                       |                                       |              |         |      |  |
| _15      | ٧  |                                       | ļ                                     | ļ            |         | ļ    | <u> </u>                                       |
| _14      | T  |                                       |                                       |              |         |      | T  |
| 13       | L  |                                       |                                       | 1            |         |      | <u> </u>                                       |
| 13<br>12 | M  |                                       |                                       |              |         |      | M  |
| _11      | L  |                                       |                                       |              |         |      | Ļ  |
| _10      | A  | S                                     |                                       |              |         |      | <u> </u>                                       |
|          | 1  | M                                     |                                       |              |         |      |  |
| .9<br>.8 | <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del> |                                       |                                       |              |         |      | <u> </u>                                       |
| <u>~</u> | S<br>S   |                                       |                                       |              |         |      |  |
| 7        | ১  |                                       |                                       |              |         |      | 3  |
| .6       |  | T                                     |                                       |              |         |      | ()   |
| _5       | L.   | P                                     | S                                     |              |         |      | Ö  |
| _4       | L  | V                                     |                                       |              |         |      | Ö  |
| _3       | Α  |                                       |                                       |              |         |      | A  |
| 2        | A<br>E   |                                       |                                       |              |         |      | A<br>E   |
| 1        | Ğ  |                                       |                                       |              |         |      | G  |
| h        |  |                                       |                                       |              |         |      | <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>   |
| 11       | R  |                                       |                                       |              |         |      | <u>R</u>                                       |
| 2        | <u>D</u>   |                                       |                                       | ļ            |         |      | <u></u>  |
| 33       | P  | S                                     |                                       |              |         |      |  |
| 4        | þ  |                                       |                                       | 1            |         |      | P  |
| 5        | E  |                                       |                                       |              |         |      | E  |
| 6<br>7   | D<br>F   |                                       |                                       |              |         |      | ۵  |
| 7        | ۶  |                                       |                                       |              |         |      | £  |
| 8        | V  |                                       |                                       |              |         |      | D<br>F<br>V                                    |
| 9        | F  | Ĺ                                     | Ÿ                                     |              |         |      | Ŏ  |
| 10       | 2  |                                       | <b></b>                               | <del> </del> | <b></b> | ···· |  |
|          | Q<br>F   |                                       |                                       | <del> </del> |         |      | Q  |
| 11       | <b>4</b>   |                                       |                                       |              |         |      | F  |
| 12       | K  |                                       |                                       | ļ            |         |      | K  |
| 13       | Α  | G                                     |                                       |              |         |      | <u>()</u>                                      |
| 14       | L  | M                                     |                                       |              |         |      | LM   |
| 15       | С  |                                       |                                       | 1            |         |      | С  |
| 16       | Ÿ  |                                       |                                       | 1            |         |      | Ÿ  |
| 17       | È  |                                       |                                       | <b>†</b>     |         |      |  |
| 18       | Ť  |                                       | ····                                  | <b></b>      |         |      | Ţ  |
| 10       |  |                                       |                                       | <del> </del> |         |      | ,<br>83  |
| 19       | N  |                                       | ļ                                     | <b> </b>     |         |      | N N  |
| 20       | G  | ļ                                     |                                       |              |         |      | G  |
| 21       | Ŧ  |                                       |                                       |              |         |      | Υ  |
| 22<br>23 | £  |                                       |                                       | 1            |         |      | E  |
| 23       | L  | R                                     |                                       |              |         |      | ()   |
| 24       | V  |                                       |                                       | 1            |         |      | Ž  |
| 25       | Ŕ  |                                       | · · · · · · · · · · · · · · · · · · · | <b></b>      |         |      | R  |
| 26       | G  | ì.                                    | Y                                     | <del> </del> |         |      |  |
|          | <del></del>                                      |                                       | ļ                                     | <b></b>      |         |      | <u> </u>                                       |
| 27       | V  | 1                                     | 1                                     | 1            | 1       | 1    | V  |

Fig. 106

| Position    |              | Di                                     | verse A      | mino A       | cid  | Amino Acid Configuration to Inhibit Metastases   |
|-------------|--------------|--|--------------|--------------|--|--|
| 28          | S            | T                                      |              |              |  |  |
| 29          | R            |  |              | 1            |  | <u>0</u><br>8  |
| 30          | Н            | S                                      | Υ            | 1            | 1  | ()   |
| 31          | i            |  |              |              | 1  |  |
| 32          | Ÿ            |  |              |              | <del>  </del>                                    | Ý  |
| 33          | Ň            |  |              |              | <del> </del>                                     | N N  |
| 34          | R            |  |              | <del> </del> | <del> </del>                                     | Ř  |
|             |              |  | ļ            | <del> </del> | <del> </del>                                     | <u> </u>   |
| 35          | E            |  |              | <b></b>      |  | <u>E</u> <u>E</u>  |
| 36          | E            |  |              |              |  |  |
| 37          | Q            |  | Y            | <b></b>      |  | 0  |
| 38          | Α            | V                                      |              |              |  | Ω  |
| 39          | R<br>F       |  |              |              |  | R<br>F   |
| 40          | ۶            |  |              |              |  | F  |
| 41          | D<br>S       |  |              |              |  | D S  |
| 42          | S            |  |              |              |  | S  |
| 43          | ۵            |  |              | 1            |  | Ö  |
| 44          | <u>v</u>     |  | ·            | ·····        | tt   | Ť v  |
| 45          | Ě            | G                                      |              | <del> </del> | <del>                                     </del> |  |
|             |              | —————————————————————————————————————— | ļ            | <del> </del> | ╁  | <u> </u>   |
| 46          | <u> </u>     | V<br>Y                                 | <b></b>      | <del> </del> | <b> </b>   | Ŏ  |
| 47          | E<br>F<br>R  | γ                                      |              | ļ            | ļ  | Q  |
| 48          |              |  |              | <b></b>      | ļl   | R  |
| 49          | A            |  |              |              |  | A  |
| 50          | У            |  |              |              |  | V  |
| 51          | Ŧ            |  |              |              |  | T  |
| 52          | L            | P<br>Q                                 |              |              |  | ()   |
| 53          | L            | Q                                      |              |              |  | Ó  |
| 54          | G            |  |              |              |  | Ğ  |
| 55          | Ť            | P                                      | R            |              | <del>  </del>                                    | The state of the s |
| 56          | L            | P                                      |              | <del> </del> | <del>  </del>                                    | \(\tag{\tag{\tag{\tag{\tag{\tag{\tag{  |
|             |              | <del></del>                            | s            | V            | <del> </del>                                     |  |
| 57          | Ą            |  |              | ļ            | ļÌ   | Q.   |
| 58          | A            |  |              | ļ            | ļ  | A  |
| 59          | E            |  |              |              | ļ  | E  |
| 60          | Y            |  |              |              |  | Y<br>W   |
| 61          | W            |  | L            | 1            |  |  |
| 62          | N            |  |              |              |  | N  |
| 63          | S            |  |              |              |  | S  |
| 64          | Q            |  |              |              |  | a  |
| 65          | K            |  |              | 1            |  | К  |
| 66          | K<br>D       | E<br>V                                 |              | ·            | † <u>-</u>                                       | Ó  |
| 67          | Ť            | V V                                    | ·            |              | †  | Ŏ  |
| 68          | <del>-</del> | <del>-</del>                           | <del> </del> |              | <del> </del>                                     | Ł Z  |
| <del></del> |              | <b></b>                                | <b></b>      | <del> </del> | <del> </del>                                     | E.   |
| 69          | E            | <u> </u>                               |              | <del> </del> | <del> </del>                                     |  |
| 70          | E            | Ğ                                      | R            |              |  | 0  |
| 71          | A            | D                                      | ĸ            | T            | 1  | Ω  |
| 72          | R            |  |              |              | <b></b>  | P P  |
| 73          | Α            |  |              | 1            | 1  | A  |
| 74          | Α            | E                                      | s            |              |  | ()   |
| 75          | L.           | V                                      | ·            | 1            |  |  |
| 76          | D            |  |              |              |  | 8  |
| 77          | R            | T                                      | T            |              |  | RT   |
| 78          | Ÿ            |  | <b></b>      | <del> </del> |  | i iii  |
| 79          | Ċ            |  | <del> </del> | <del> </del> | <del>                                     </del> | č  |
| 80          | R            |  | <b></b>      | <del> </del> | <del> </del>                                     | Ř  |
| 00          |              |  |              | <del> </del> | <del>  </del>                                    | <u>                                   </u>   |
| 81          | H            |  |              | ļ            | ļ  | н  |
| 82          | N            |  |              | <b>!</b>     | 1 1  | N  |
| 83          | Υ            |  |              |              |  | Y  |
| 84          | Æ            | Q                                      |              |              |  | ()   |
| 85          | l.           | V                                      |              |              |  | ()   |
| 86          | A            | Ē                                      | G            | 1            |  | ()   |
|             |              | h                                      | 4            |              |  | 4 <del></del>  |

Fig. 107

| Position | 1  | Di | verse A | mino Ac      | sid |   | Amino Acid Configuration to Inhibit Metastases |
|----------|--|----|---------|--------------|-----|---|--|
| 87       | F  | Ł  | Y       |              |     |   | LL   |
| 88       | R  |    |         |              |     |   | Я  |
| 89       | R<br>G                                     | T  |         |              |     |   | ()   |
| 90       | ī  | T  |         |              |     |   | ()   |
| 91       | i.   |    |         |              |     |   | Ľ.   |
| 92       |  |    |         |              |     |   | ā  |
|          | Q<br>R                                     |    |         |              |     |   | Ř  |
| 93       |  |    |         | ļ            |     |   | <u> </u>                                       |
| 94       | R<br>V                                     |    |         | <b></b>      |     |   | R  |
| 95       |  |    |         |              |     |   | V  |
| 96       | E  |    |         |              |     |   | E  |
| 97       | P<br>T<br>V<br>T                           |    |         |              |     |   | Р  |
| 98       | Ŧ  |    |         |              |     |   | T  |
| 99       | V  |    |         |              |     |   | V  |
| 100      | 1  |    |         |              |     |   | T  |
| 101      | 1  |    |         |              |     |   |  |
| 102      | s  |    |         |              |     |   |  |
|          | p  |    |         |              |     |   | S P  |
| 103      | <u>                                   </u> |    |         | <b>!</b>     |     |   |  |
| 104      | \$   |    |         |              |     |   | S  |
| 105      | R<br>T<br>E                                |    |         | ļ            |     |   | R  |
| 106      | I T  |    |         |              |     |   | T  |
| 107      | E  |    |         | 1            |     |   | ž.   |
| 108      | Α  |    |         |              |     |   | A  |
| 109      | L  |    |         |              |     |   | Į,   |
| 110      | N  |    |         |              |     |   | N  |
| 111      | H  |    |         |              |     |   | Ĥ  |
| 112      |  |    |         |              |     |   |  |
| *        | H  |    |         |              |     |   | H  |
| 113      | N  |    |         |              |     |   | N  |
| 114      | L  |    |         |              |     |   | <u> </u>                                       |
| 115      | <u> </u>                                   |    |         | L            |     |   | Ł  |
| 116      | 1  | V  |         |              |     |   | IV   |
| 117      | С  |    |         | 1            |     |   | <u> </u>                                       |
| 118      | S  |    |         |              |     |   | S  |
| 119      | V  |    |         |              |     |   | ٧  |
| 120      | V<br>T                                     |    |         |              |     |   | V<br>T   |
| 121      | Ď  |    |         | <b>†</b>     |     |   | Ď  |
| 122      | F  |    |         | <b></b>      |     |   | F  |
| 123      | Ÿ  |    |         |              |     |   | Ý  |
|          |  |    |         | ļ            |     |   |  |
| 124      | P  |    |         |              |     |   | P  |
| 125      | A<br>H                                     | G  | S       |              |     |   | AA   |
| 126      |  | Q  |         |              |     |   | Ü  |
| 127      | 1  |    |         |              |     |   | l l  |
| 128      | K  |    |         |              |     |   | K  |
| 129      | V  |    |         | 1            |     |   | V  |
| 130      | Q  | R  |         | 1            |     |   | Q .  |
| 131      | w  |    | <b></b> | <b>!</b>     |     |   | W  |
| <b>}</b> | F  |    |         |              |     |   | ř.   |
| 132      |  |    |         | <del> </del> |     |   |  |
| 133      | R  |    | ļ       | ļ            |     |   | 8  |
| 134      | N  |    |         |              |     |   | N  |
| 135      | D  |    |         |              |     |   | D  |
| 136      | Q  |    |         |              |     |   | Q  |
| 137      | Æ  |    |         | 1            |     |   | 5  |
| 138      | 33   |    |         |              |     |   | Æ  |
| 139      | T  |    |         | 1            |     |   | Ť  |
| 140      | Á  | Ŧ  | ·       | <b></b>      |     |   | Ò  |
| 141      | G  |    |         |              |     |   | Ğ  |
|          | 1 37                                       |    | <b></b> | <b></b>      |     |   | v  |
| 142      | À  |    | ļ       | <b></b>      |     | ļ | , , , , , , , , , , , , , , , , , , ,          |
| 143      | V  |    | ļ       | ļ            |     |   | V  |
| 144      | S  |    |         |              |     |   | \$   |
| 145      | Ŧ  |    |         | 1            |     |   | Ť  |

Fig. 108

| Position |             | Di | verse A | mino A  | old | ~~~~~ | Amino Acid Configuration to Inhibit Metastases |
|----------|-------------|----|---------|---------|-----|-------|--|
| 146      | P           |    |         |         |     |       | P  |
| 147      | L           |    |         |         |     |       | L  |
| 148      | 1           |    |         |         |     |       |  |
| 149      | R           |    |         |         |     |       | R  |
| 150      | N           |    |         |         |     |       | Ŋ  |
| 151      | G           |    |         |         |     |       | G  |
| 152      | D           |    | L       |         |     |       | D  |
| 153      | W           |    |         |         |     |       | W  |
| 154      | T           |    |         |         |     |       | Ť  |
| 155      | Ę           |    |         |         |     |       | g g  |
| 156      | Q           |    |         |         |     |       | Q  |
| 157      | 1           |    |         |         |     |       |  |
| 158      | L           |    |         | <b></b> |     |       | <u>L</u>                                       |
| 159      | V           |    |         |         |     |       | V<br>M   |
| 160      | M           |    |         |         |     |       |  |
| 161      | L<br>E      |    |         |         |     |       | £<br>E   |
| 162      |             |    |         |         |     |       |  |
| 163      | M           |    |         |         |     |       | 网  |
| 164      | T           |    |         |         |     |       | Ť  |
| 165      | Р           |    |         |         |     |       | Р  |
| 166      | P<br>Q<br>H |    |         |         |     |       | Q  |
| 167      |             | R  |         |         |     |       | 0  |
| 168      | G           |    |         |         |     |       | G  |
| 169      | ם           |    |         |         |     |       | D  |
| 170      | V<br>Y      |    |         |         |     |       | V  |
| 171      | Y           |    |         |         |     |       | Y<br>T   |
| 172      | Ţ           |    |         |         |     |       | Ţ  |
| 173      | С           |    |         |         |     |       | C  |
| 174      | Н           |    |         |         |     |       | H  |
| 175      | V           |    |         |         |     |       | V  |
| 176      | E           |    |         |         |     |       | E  |
| 177      | H           |    |         |         |     |       | H  |
| 178      | P           |    |         |         |     |       | P<br>\$  |
| 179      | P<br>S      |    |         |         |     |       | \$   |
| 180      | L           |    |         |         |     |       | Ļ  |
| 181      | Q           |    |         |         |     |       | Q  |
| 182      | N           | S  |         |         |     |       | ()   |
| 183      | P           |    |         |         |     |       | P  |
| 184      | 1           |    |         |         |     |       |  |
| 185      | 1           | Ť  |         |         |     |       | ()   |
| 186      | V           |    |         |         |     |       | V  |
| 187      | E           |    |         |         |     |       | E  |
| 188      | W           |    |         |         |     |       | W  |
| 189      | R           |    |         |         |     |       | R  |
| 190      | Α           |    |         |         |     |       | A  |
| 191      | Q           |    |         | I       |     |       | Q  |
| 192      | S           |    |         |         |     |       | \$   |
| 193      | E           |    |         | 1       | T   |       | E  |
| 194      | E<br>S      |    |         |         | ļ   | 1     | S  |
| 195      | Α           |    |         |         |     |       | A  |
| 196      | Q           |    |         |         |     |       | Q  |
| 197      | N           | S  |         |         |     |       | 0  |
| 198      | K           |    |         |         |     |       | K  |
| 199      | M           |    |         |         |     |       | W  |
| 200      | L           |    |         | 1       | ·   |       | Ĭ.   |
| 201      | ŝ           |    |         | 1       |     |       | S S  |
| 202      | Ğ           |    |         | <b></b> |     | 1     | Ğ  |
| 203      | Ť           | V  |         | <b></b> |     | 1     | II   |
| 204      | Ġ           |    |         |         |     |       | Ğ  |
| L        |             | L  | 1       | 1       |     | 3     | · ·  |

Fig. 109

| Position |        | Di | verse Amino Ac | id | Amino Acid Configuration to Inhibit Metastases |
|----------|--------|----|----------------|----|--|
| 205      | G      |    |                |    | G  |
| 206      | F      |    |                |    | F  |
| 207      | V      |    |                |    | V  |
| 208      | L      |    |                |    | L  |
| 209      | G      |    |                |    | G  |
| 210      | L.     |    |                |    | <u>L</u>                                       |
| 211      | 1      |    |                |    | l l  |
| 212      | ۶      |    |                |    | ۶  |
| 213      | L      |    |                |    | <u>L</u>                                       |
| 214      | G      |    |                |    | G  |
| 215      | L      |    |                |    | L.   |
| 216      | G      |    |                |    | G  |
| 217      | L      |    |                |    | L  |
| 218      | ł      |    |                |    | ţ  |
| 219      | 1      |    |                |    | l l  |
| 220      | H      | R  |                |    | ()   |
| 221      | H      | a  |                |    | ()   |
| 222      | R      |    |                |    | R  |
| 223      | ន      |    |                |    | S  |
| 224      | S<br>Q | R  |                |    | QR   |
| 225      | ĸ      |    |                |    | K  |
| 226      | G      |    |                |    | G  |
| 227      | þ      |    |                |    | P  |
| 228      | Q      |    |                |    | Q  |
| 229      | G<br>P |    |                |    | G  |
| 230      | p      |    |                |    | p  |
| 231      | P      |    |                |    | p  |
| 232      | Þ      |    |                |    | Þ  |
| 233      | A      |    |                |    | A  |
| 234      | G      |    |                |    | G  |
| 235      | Ļ      |    |                |    | <u> </u>                                       |
| 236      | L      |    |                |    | <u>L</u>                                       |
| 237      | Н      |    |                |    | H  |

Fig. 110

| Position       |          | Di         | verse A     | mino Ac   | old . | ************** | Amino Acid Configuration to Inhibit Metastases |
|----------------|----------|------------|-------------|-----------|-------|----------------|--|
| _29            | M        |            |             |           |       |                |  |
| _28            | V        |            |             |           |       |                | V  |
| _27            | С        |            |             |           |       |                | C  |
| _26            | L        |            |             |           |       |                | Ĺ.   |
| _25            | K<br>F   | R<br>L     |             |           |       |                | ()   |
| _24            |          | Į.         |             |           |       |                | ĹL.  |
| _23            | P        |            |             |           |       |                | P  |
| _22            | G        |            |             |           |       |                | G  |
| _21            | G<br>S   |            |             |           |       |                | <u> </u>                                       |
| _20            | \$       |            |             |           |       |                | \$   |
| 19             | С        |            |             |           |       |                | C  |
| 18             | M        |            |             |           |       |                | M  |
| 17             | A A      | T<br>V     |             |           |       |                | ()   |
| _16            | Α        | У          |             |           |       |                | ()   |
| _15            | L_       |            |             |           |       |                | L.   |
| _14            | Ţ        |            |             |           |       |                | Ť  |
| 13             | V        |            |             |           |       |                | <u> </u>                                       |
| _12            | Ţ        |            |             |           |       |                | Ť  |
| _11            | L        |            |             |           |       |                | Ĺ  |
| 10<br>9        | M<br>V   |            |             |           |       |                | M  |
| 9              | <u> </u> |            |             |           |       |                | V  |
| _8             | L        |            |             |           |       |                | <u>L</u>                                       |
| _8             | S        |            |             |           |       |                | \$   |
| _6<br>_5       | S        |            |             | L         |       |                | S  |
| _5             |          |            |             |           |       |                | P  |
| 4              | L        |            |             |           |       |                | Ł  |
| _4<br>_3<br>_2 | A<br>L   |            |             |           |       |                | A<br>L   |
| _2             |          |            |             |           |       |                | L.   |
| 1              | Α        | S          |             |           |       |                | Û  |
| 11             | G<br>D   |            |             |           |       |                | G  |
| 2<br>3         | D        |            |             |           |       |                | D.   |
| 3              | Q        |            |             |           |       |                | Ţ  |
| 4<br>5<br>6    | Q        | R          |             |           |       |                | Ω  |
| 5              | <u> </u> |            |             |           |       |                | p  |
|                | R        |            |             |           |       |                | R  |
| 7              | F        |            |             |           |       |                | F  |
| 8              | <u></u>  |            |             |           |       |                |  |
| 9              | E        | K<br>Q     | W<br>Y      |           |       |                | Ω  |
| 10             | E        | Q          |             |           |       |                | Q  |
| 11             | D        | G<br>T     | L           | Р         | S     | V              | Ö  |
| 12             | K        |            | <b></b>     | ļ <u></u> |       |                | Ŏ  |
| 13             | F        | G          | Н           | R         | S     | Y              | <u> </u>                                       |
| 14             | E        | K          | ļ           | ļ         |       |                | Ö  |
| 15             | C        | <u> </u>   | <del></del> | <b> </b>  |       |                | <u> </u>                                       |
| 16             | H        | Q          | Υ           | <b></b>   |       |                | <u> </u>                                       |
| 17             | F        |            |             | ļ         |       |                | Ę  |
| 18             | ٤        |            |             | ļ         |       |                | ŧ.   |
| 19             | N        |            |             |           |       |                | N  |
| 20             | Ğ        |            | ļ           |           |       |                | G  |
| 21             | 7 -      |            | ļ           |           |       |                | T  |
| 22             | E        |            |             |           |       |                | £  |
| 23             | R        |            | ļ           |           |       |                | R  |
| 24             | V        | ļ <u>.</u> | ļ           | ļ         |       |                | <u>V</u>                                       |
| 25             | Q        | R          | ļ           | ļ         |       |                | Q  |
| 26             | ۴        | L          | Y           |           |       |                | ()   |
| 27             | L        |            | ļ           | ļ         |       |                |  |
| 28             | ۵        | E          | Н           | L         |       |                | Q.   |
| 29             | R        |            |             |           |       |                | 7  |
| 30             | С        | G          | Н           | L         | R     | Y              | ()   |

Fig. 111

| Position     | 1  | Di        | verse A  | mino A       | cid          | Amino Acid Configuration to Inhibit Metastases |
|--------------|--|-----------|----------|--------------|--------------|--|
| 31           | F  |           | V        | 1            | T            | ()   |
| 32           | H  | Ý         | ×        | <del> </del> | ·····        |  |
| 33           | H  | Ň         | ······   | <b></b>      | ļ            | <u> </u>                                       |
|              | <u> </u>   | 1.4       |          |              | ļ            | 2  |
| 34           | Q<br>E   |           |          |              |              | Q  |
| 35           | E  |           |          |              |              | E  |
| 36           | E  |           |          |              |              | Æ  |
| 37           | ۶  | Ŀ         | N        | S            | Y            | ()   |
| 38           | Α  | L         | V        |              |              | ()   |
| 39           | R  |           |          |              |              | Û<br>R   |
| 40           | F  | Y         |          |              |              | ()   |
| 41           |  |           |          |              |              | - K  |
|              | D<br>G   |           |          | <b></b>      |              | D<br>S<br>D                                    |
| 42           | 2  |           |          | ļ            | ļ            | 3  |
| 43           | S<br>D<br>V  |           |          |              |              | D .  |
| 44           |  |           |          |              |              | У  |
| 45           | G  |           |          |              |              |  |
| 46           | £  |           |          |              |              | E  |
| 47           | F  | Y         |          | I            | [            | ()   |
| 48           | Ŕ  |           |          | 1            |              | Ř  |
| 49           |  | ·         | ·····    | <del> </del> | t            | Ä  |
| 50           | <del>  ()                                   </del> |           |          | <b>†</b>     |              |  |
| 50<br>51     | Y<br>T<br>E  |           |          |              |              | *  |
| 21           | 1  |           |          |              |              |  |
| 52           |  |           |          |              |              | Ë  |
| 53           | L  |           |          |              |              | L.   |
| 54           | G  |           |          |              |              | G  |
| 55           | R  |           |          |              |              | R<br>P   |
| 58           | p  |           |          |              |              | p  |
| 57           | Α  | n         | S        | V            |              | ()   |
| 58           | À  | D<br>E    | <u>~</u> | <u>`</u>     |              | Ó  |
| 59           |  |           |          |              |              |  |
| <del></del>  | E  |           | ΨΥ       | <b></b>      | ļ            | E  |
| 60           | H  | S         | Y        |              |              | <u>Q</u>                                       |
| 61           | W  |           |          |              |              | W  |
| 62           | N  |           |          |              |              | N  |
| 63           | S<br>Q   |           |          |              |              | \$<br>Q  |
| 64           | Q  |           |          |              |              | Q  |
| 65           | K  |           |          |              |              | K  |
| 66           | D  |           |          | ·            |              | D  |
| 67           | F  |           | T.       |              | ·            | \(\frac{1}{\}\)                                |
|              | *************                                      | ·····     | ļ        | <b></b>      |              |  |
| 68           | E<br>D   |           |          |              |              | E ()   |
| 69           |  |           |          |              |              | E .  |
| 70           |  | Q<br>E    | R<br>K   |              |              | {}   |
| 71           | Α  | E         | K        | R            |              | ()   |
| 72           | R  |           |          | 1            |              | R  |
| 73           | A  | G         |          | 1            |              | ()   |
| 74           | Α  | E         | L.       | Q            | R            | Õ  |
| 75           | Ý  | · · · · · | ······   |              |              | V  |
| possessesses |  |           | ļ        |              | <del> </del> | Ď  |
| 76           | <u>D</u>   |           | <b></b>  |              |              |  |
| 77           | N  | Ţ         | ļ        | ļ            | ļ            | <u>Q</u>                                       |
| 78           | V  | Y         |          |              | ļ            | <u> </u>                                       |
| 79           | С  |           | L        |              |              |  |
| 80           | R  |           |          |              |              | Ŕ  |
| 81           | Н  |           |          |              |              | H  |
| 82           | N  |           |          |              |              | N  |
| 83           | Ÿ  |           |          |              | 1            | Ÿ  |
| 84           | Ġ  |           | ļ        | <b>†</b>     | <b>†</b>     | Ġ  |
|              | - A  | ····      |          | <del> </del> |              | <u> </u>                                       |
| 85           | A  | V.        | ļ        | <del> </del> |              | Ŏ  |
| 86           | G  | ٧         | ļ        | ļ            |              | Q  |
| 87           | Æ  |           | L        |              |              | E  |
| 88           | S  |           |          |              |              | S  |
| 89           | ۴  |           |          |              |              | ¥*   |

Fig. 112

| Position |        | Di      | verse A  | mino A   | oid      | 1            | Amino Acid Configuration to Inhibit Metastases |
|----------|--------|---------|----------|----------|----------|--------------|--|
| 90       | T T    |         |          | 1        | 1        |              | Ť  |
| 91       | V      |         |          |          |          |              | V  |
| 92       | Q      |         |          |          |          |              | Q  |
| 93       | 0 8    |         |          |          |          |              | R  |
| 94       | R      |         |          |          |          |              | R  |
| 95       | R<br>V |         |          |          |          |              | R<br>V   |
| 96       | E      | H       | Q        | Y        |          |              |  |
| 97       | P      |         |          |          |          |              | <u>Q</u><br>P                                  |
| 98       | E      | K       |          |          |          |              |  |
| 99       | V      |         |          |          |          |              | <del>Q</del>                                   |
| 100      | T      |         |          |          |          |              |  |
| 101      | V      |         |          |          |          |              | Т<br>V<br>Y                                    |
| 102      | V<br>Y |         |          |          |          |              | Υ  |
| 103      | P      |         |          |          |          |              | P  |
| 104      | Α      | S       |          |          |          |              | ()   |
| 105      | K      |         |          |          |          |              | К  |
| 106      | K<br>T |         |          |          |          |              | <u>К</u><br>Т                                  |
| 107      | Q      |         |          |          |          |              | Q  |
| 108      | P      |         |          |          | T        |              | P  |
| 109      |        |         |          |          |          |              | 1  |
| 110      | O.     |         |          |          |          |              | Q  |
| 111      | Н      |         |          |          |          |              | Н  |
| 112      | H      |         |          |          |          |              | H  |
| 113      | N      |         |          |          |          |              | N  |
| 114      | L      |         |          |          |          |              | Ļ  |
| 115      | L      |         |          |          |          |              | Į.   |
| 116      | L<br>V |         |          |          |          |              | V  |
| 117      | C      |         |          |          |          |              | C  |
| 118      | S      |         |          |          |          |              | S  |
| 119      | V      |         |          |          |          |              | V  |
| 120      | N      | S       |          |          |          |              | ()   |
| 121      | ۶      |         |          |          |          |              | F  |
| 122      | G      |         |          |          |          |              | G  |
| 123      | G<br>Y |         |          |          |          |              | G<br>Y   |
| 124      | ₽      |         |          |          |          |              | P  |
| 125      | G      |         |          |          |          |              | G  |
| 126      | S      |         |          |          |          |              | S  |
| 127      | 1      |         |          |          |          |              |  |
| 128      | E      |         |          |          |          |              | £  |
| 129      | E<br>V |         |          |          | 1        |              | ;<br>E<br>V                                    |
| 130      | Ŕ      |         | ·        |          |          |              | Ŕ  |
| 131      | W      |         | <b></b>  | <b></b>  | T        |              | W  |
| 132      | F      |         |          | 1        | T        |              | F  |
| 133      | L      | R       | ·        | <u> </u> | 1        |              | ()   |
| 134      | N      |         |          |          |          |              | Ň  |
| 135      | G      |         | ·        | 1        | 1        |              | G  |
| 136      |        |         |          |          | 1        |              | Q  |
| 137      | O E    |         | <b></b>  | <b></b>  | 1        |              | Ë  |
| 138      | E      |         | <b> </b> |          | 1        |              | E  |
| 139      | ĸ      |         |          |          | 1        |              | ĸ  |
| 140      | À      | Τ       | <b></b>  | <b></b>  | <b>1</b> |              | ()   |
| 141      | G      |         | <b></b>  |          |          |              | Ğ  |
| 142      | M      | V       |          |          |          |              | Ŏ.   |
| 143      | Ÿ      | · · · · | <b></b>  | <b></b>  | <b>†</b> | <b>  </b>    |  |
| 144      | ŝ      |         |          | <b>†</b> | <b>†</b> | <del> </del> | V<br>S<br>T                                    |
| 145      | Ť      |         | <b> </b> | <b></b>  |          |              | Ť  |
| 146      | G      |         | <b> </b> | <b></b>  |          |              | Ġ  |
| 147      | L.     |         | <b></b>  |          |          |              | i.   |
| 148      | 1      |         |          |          | <b>†</b> | <del> </del> | 1  |
| t        | L      | L       | i        | l        | ل        | il           |  |

Fig. 113

| Position   |              | Di      | verse A  | mino Ac      | old          |          | Amino Acid Configuration to Inhibit Metastases |
|------------|--------------|---------|----------|--------------|--------------|----------|--|
| 149        | Н            | Q       |          | 1            | 1            | T        | ()   |
| 150        | N            |         | <b></b>  | <b>†</b>     | 1            | 1        | Ň  |
| 151        | G            |         |          |              |              |          | Ğ  |
| 152        | G<br>D       |         |          | <b>†</b>     | <b></b>      | <b> </b> | Ö  |
| 153        | 1/1/         |         |          |              |              |          | 0<br>W<br>T                                    |
| 154        | W<br>T       |         |          |              | <del> </del> |          | Ϋ́   |
| 155        | <del></del>  |         |          |              | <b></b>      |          | F  |
| 156        | ·····        |         |          | <del> </del> | <del> </del> |          | à  |
| 157        | Q<br>T       |         |          | <del> </del> | <del> </del> |          | Ť  |
| 158        |              |         |          | <del> </del> | <del> </del> |          | L.   |
|            | L<br>V       |         |          | ļ            | <b>}</b>     | -        | V  |
| 159<br>160 | M            |         |          |              |              |          |  |
|            | ************ |         |          |              |              |          | M .  |
| 161        | <u>L</u>     |         | <b></b>  | <b></b>      | <b></b>      |          | <u> </u>                                       |
| 162        | E            |         |          | ļ            | ļ            |          | E<br>T   |
| 163        | Ţ            |         |          |              | ļ            |          |  |
| 164        | Ę            | У       |          |              |              |          | <u>Q</u>                                       |
| 165        | p            |         |          |              | ļ            |          | P  |
| 166        | Q            | R       | ļ        | ļ            | ļ            | ļ        | <u>Q</u>                                       |
| 167        | S            |         |          | <b></b>      | ļ            | ļ        | S  |
| 168        | G            |         |          |              |              |          | G  |
| 169        | E<br>V       |         |          |              | ļ            |          | ž  |
| 170        |              |         |          |              |              |          | V  |
| 171        | Υ            |         |          |              |              |          | Y  |
| 172        | Ţ            |         |          |              |              |          | Ϋ  |
| 173        | C            |         |          |              |              |          | C  |
| 174        | Q            |         |          |              |              |          | С<br>V<br>Е                                    |
| 175        | Q<br>V<br>E  |         |          |              |              |          | V  |
| 176        | 8            |         |          |              |              |          | £  |
| 177        | Н            |         |          |              |              |          | H  |
| 178        | P            |         |          | ·····        | 1            |          | P  |
| 179        | S            |         |          | ·····        | İ            |          | S  |
| 180        | L            | V       |          | 1            | İ            |          | 0  |
| 181        | M            | V<br>T  |          |              | ·            |          |  |
| 182        |              |         |          |              |              |          | × × × × × × × × × × × × × × × × × × ×          |
| 183        | S<br>P       | ·       |          | <del> </del> | <b>!</b>     |          | )<br>S<br>P                                    |
| 184        | L            |         |          | <b></b>      | ·            |          | i.   |
| 185        | Ť            |         |          |              | <b></b>      |          | T  |
| 186        | <del>-</del> |         |          | ļ            |              |          |  |
|            | V<br>E       |         |          |              | ····         |          | V<br>E   |
| 187        | 167          |         | ļ        |              | <b>}</b>     | <b>}</b> | 124  |
| 188        | W            |         |          | ļ            | ļ            | ļ        | W  |
| 189        | Ŗ            | S       | <b></b>  | <del> </del> | <b></b>      |          | Q  |
| 190        | <u>A</u>     |         | ļ        |              | ļ            |          | A  |
| 191        | R            |         |          | ļ            | ļ            |          | R  |
| 192        | S            |         |          | ļ            | ļ            |          | S  |
| 193        | E            |         | ļ        |              | ļ            | ļ        | E E  |
| 194        | S            |         |          |              | ļ            |          | \$   |
| 195        | A            |         |          |              | L            |          | A  |
| 196        | Q            |         |          |              |              |          | Q  |
| 197        | s            |         |          |              |              |          | S  |
| 198        | ĸ            |         |          |              |              |          | К  |
| 199        | M            |         |          |              | 1            |          | М  |
| 200        | L.           |         |          |              | <b>1</b>     |          | Ł.   |
| 201        | S            |         | <b></b>  | 1            | T            |          | Ş  |
| 202        | Ğ            |         | <b></b>  | 1            | <b>†</b>     |          | G  |
| 203        | Ÿ            |         |          | 1            | İ            |          | <u> </u>                                       |
| 204        | Ğ            |         | <b></b>  | 1            | <b>!</b>     | <b>!</b> | Ğ  |
| 205        | G            |         | <b></b>  | <del> </del> | <b>†</b>     | <b>!</b> | G  |
| 205        | Ę.           | <b></b> | <b> </b> | <del> </del> | <del> </del> | <b> </b> | <u> </u>                                       |
| 207        | <del></del>  |         | <b> </b> | <del> </del> | <del> </del> | <b></b>  | <u> </u>                                       |
| 4 444      | 1 V          |         | 1        | 4            | E .          | 2        | ı V  |

Fig. 114

| Position |    | Di | verse Ar | nino Ac | id                                      | <br>Amino Acid Configuration to Inhibit Metastases |
|----------|----|----|----------|---------|---|--|
| 208      | L  |    |          |         |   | Ł  |
| 209      | G  |    |          |         |   | G  |
| 210      | L  |    |          |         |   | Ł.   |
| 211      | L  |    |          |         | *************************************** | L.   |
| 212      | ۴  |    |          |         |   | F  |
| 213      | L. |    |          |         |   | Ł  |
| 214      | G  |    |          |         |   | G  |
| 215      | A  |    |          |         |   | A  |
| 216      | G  |    |          |         |   | G  |
| 217      | L  |    |          |         |   | L.   |
| 218      | F  |    |          |         |   | F  |
| 219      | 1  |    |          |         |   | ļ  |
| 220      | Y  |    |          |         |   | Y  |
| 221      | F  |    |          |         |   | F  |
| 222      | R  |    |          |         |   | R  |
| 223      | N  |    |          |         |   | N  |
| 224      | Q  |    |          |         |   | Q  |
| 225      | K  |    |          |         |   | K  |
| 226      | G  |    |          |         |   | G  |
| 227      | н  |    |          |         |   | Ħ  |
| 228      | S  |    |          |         |   | 8  |
| 229      | G  |    |          |         |   | G  |
| 230      | L  |    |          |         |   | į,   |
| 231      | þ  | Q  |          |         |   | ⟨}   |
| 232      | þ  |    |          |         |   | P  |
| 233      | R  | Ŧ  |          |         |   | ()   |
| 234      | G  |    |          |         |   | G  |
| 235      | ۴  |    |          |         |   | Ę.   |
| 236      | L  |    |          |         |   | Ĺ.   |
| 237      | S  |    |          |         |   | S  |

Fig. 115

| Position                               |                  | Di      | iverse A     | mino A       | oid          |   | Amino Acid Cenfiguration<br>With Less Tendency to Malignancy |  |  |  |
|--|------------------|---------|--------------|--------------|--------------|---|--|--|--|--|
| _29                                    | M                | F       | T            | 1            | F            | 1 | M  |  |  |  |
| _28                                    | M                |         | <del> </del> | ļ            | ·····        |   | M  |  |  |  |
|  | Ÿ                |         | <del> </del> | <del> </del> | <del> </del> |   | v v  |  |  |  |
| <u>26</u>                              |                  |         |              |              | ļ            |   |  |  |  |  |
| <del></del>                            | ŗ                |         | ļ            | <del> </del> |              |   | i.   |  |  |  |
| 25                                     | Q<br>V           |         | ļ            | <b>}</b>     | ļ            |   | Q  |  |  |  |
| _24                                    |                  |         | <b>]</b>     |              |              |   | V  |  |  |  |
| _23                                    | \$               |         | <u> </u>     | 1            |              |   | 8  |  |  |  |
| _22                                    | Α                |         | L            |              |              |   | A  |  |  |  |
| _21                                    | Α                |         |              |              |              |   | A<br>P   |  |  |  |
| _20                                    | A<br>P           |         |              |              |              |   | β  |  |  |  |
| 19                                     | R                |         |              |              |              |   | R  |  |  |  |
| 18                                     | Ť                |         | <u> </u>     | <u> </u>     | ·            |   | Ť  |  |  |  |
| 17                                     | Ý                |         | <del> </del> | <del> </del> |              |   | · v  |  |  |  |
| 16                                     | Ä                |         | <b></b>      |              | <b></b>      |   | Ä  |  |  |  |
| <del>~~~~~~~~~~</del>                  |                  |         | <b>ļ</b>     | <b></b>      | <b></b>      |   | <del> </del>   |  |  |  |
| 15                                     |                  |         | ļ            |              |              |   | <u> </u>   |  |  |  |
| 14                                     | T                |         |              |              |              |   | T  |  |  |  |
| 13                                     | A                | <u></u> | ļ            | 1            | <u> </u>     |   | A  |  |  |  |
| _12                                    | L                |         |              |              |              |   | i,   |  |  |  |
| _11                                    | l.               |         | 1            |              |              |   | L.   |  |  |  |
| _10                                    | M                |         | -            | -            |              |   | M  |  |  |  |
| -8                                     | V                |         | 1            | 1            |              |   | V  |  |  |  |
|  | Ĺ                | ·····   | <del> </del> | ······       | ·····        |   | Ĺ  |  |  |  |
| 8<br>7                                 | L L              | <b></b> | <del> </del> | <del> </del> | <b>!</b>     |   |  |  |  |  |
|  |                  |         | <del> </del> | 1            | ļ            |   | L.   |  |  |  |
| _6<br>_5                               | Ţ                |         |              |              |              |   | <u>T</u>   |  |  |  |
|  | S                |         |              |              |              |   | S  |  |  |  |
| 4                                      | V                |         |              |              |              |   | V  |  |  |  |
| 3                                      | V                |         |              |              |              |   | V  |  |  |  |
| _2                                     | Q                |         |              |              |              |   | Q  |  |  |  |
| _1                                     | G                |         |              | 1            |              |   | G  |  |  |  |
| 1                                      | R                |         | <b>†</b>     | <del> </del> | ·            |   | Ř  |  |  |  |
| 2                                      | Ä                | ·····   | ·            |              |              |   | À  |  |  |  |
| 3                                      | <del></del>      |         | <b></b>      | <b></b>      | ·            |   |  |  |  |  |
|  | p                | ļ       | <b>}</b>     |              | ļ            |   | P  |  |  |  |
| 4                                      |                  |         | ļ            |              |              |   |  |  |  |  |
| 5                                      | €                |         |              |              |              |   | E  |  |  |  |
| 6                                      | N                |         |              |              |              |   | Ŋ  |  |  |  |
| 7                                      | Υ                |         | 1            | 1            | l            |   | Y  |  |  |  |
| 8                                      | L.               | V       |              |              |              |   | LL   |  |  |  |
| 9                                      | ۴                | Н       | Y            |              |              |   |  |  |  |  |
| 10                                     | Q                |         | <b></b>      | <b>†</b>     | ·····        |   | å  |  |  |  |
| 11                                     | Ğ                | L       |              |              |              |   | LL.  |  |  |  |
|  | - <del>2</del>   |         | <del> </del> | 1            | <del> </del> |   | <u> </u>   |  |  |  |
| 12                                     | R                |         | <del> </del> | <del> </del> |              |   | 8  |  |  |  |
| 13                                     | Q<br>E<br>C      |         | ļ            | ļ            | ļ            |   | Q<br>E<br>C<br>Y   |  |  |  |
| 14                                     | L.E.             |         | ļ            | <b></b>      | ļ            |   | <u> </u>   |  |  |  |
| 15                                     | C                |         | 1            |              |              |   | C C  |  |  |  |
| 16                                     | Y                |         |              |              |              |   | Y  |  |  |  |
| 17                                     | Α                |         |              | 1            |              |   | A  |  |  |  |
| 17<br>18                               | A<br>F           |         | T            |              |              |   | A<br>F   |  |  |  |
| 19                                     | N                |         | <del> </del> |              | ·            |   | N  |  |  |  |
| 20                                     | <u> </u>         |         | <b>!</b>     | <b>†</b>     | <b>!</b>     |   | 8  |  |  |  |
| 21                                     | G<br>T           | ·····   | <b></b>      | <del> </del> | <del> </del> |   | G<br>T   |  |  |  |
| <u> </u>                               |                  |         | <b></b>      | <del> </del> | <b> </b>     |   | <u></u>  |  |  |  |
| 22                                     | Q                |         | ļ            | ļ            | ļ            |   | Q  |  |  |  |
| 23                                     | R                |         |              | ļ            |              |   | R  |  |  |  |
| 24                                     | Q<br>R<br>F<br>L |         |              |              |              |   | R  |  |  |  |
| 22<br>23<br>24<br>25                   | L                |         |              |              |              |   | <u>L</u>   |  |  |  |
| 26                                     | E                | ·       | T            | ·            | <u> </u>     |   | £  |  |  |  |
| 27                                     | <b>5</b>         |         | <b>†</b>     | <b>†</b>     | <b></b>      |   | Ř  |  |  |  |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | <del> ;}</del>   |         | <del> </del> | <del> </del> | <b> </b>     | ļ | <u> </u>   |  |  |  |
| 28<br>29<br>30                         | Ÿ                | ļ       | <del> </del> | <b></b>      | <b>}</b>     |   | Y .  |  |  |  |
| <u> </u>                               | ļļ               |         | ļ            |              | ļ            |   |  |  |  |  |
| 30                                     | Y                | 1       | 1            | 1            |              | 1 | Y  |  |  |  |

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Fig. 116

| Fig. 11  | 116         |    |         |         |      |   |                                  |  |  |  |
|----------|-------------|----|---------|---------|------|---|----------------------------------|--|--|--|
| Position | T           | Di | verse A | mino Ac | aid: |   | Amino Acid Configuration         |  |  |  |
|          |             |    |         |         |      |   | With Less Tendency to Malignancy |  |  |  |
| 31       | N           |    |         |         |      |   | N                                |  |  |  |
| 32       | R           |    |         |         |      |   | Ŕ                                |  |  |  |
| 33       | E           |    |         |         |      |   | E                                |  |  |  |
| 34       | E           |    |         |         |      |   | E                                |  |  |  |
| 35       | F           | L  | Y       |         |      |   | 0                                |  |  |  |
| 36       | Α           | >  |         |         |      |   | ()                               |  |  |  |
| 37       | R           |    |         |         |      |   | 8                                |  |  |  |
| 38       | F           |    |         |         |      |   | F<br>D                           |  |  |  |
| 39       | Ö           |    |         |         |      |   | D                                |  |  |  |
| 40       | s           |    |         |         |      |   | S                                |  |  |  |
| 41       | D           |    |         |         |      |   | D                                |  |  |  |
| 42       | V           |    |         |         |      |   | V                                |  |  |  |
| 43       | G           |    |         |         |      |   | <u> </u>                         |  |  |  |
| 44       | G<br>EE     |    |         |         |      |   | Æ                                |  |  |  |
| 45       | F           |    |         |         |      |   | F                                |  |  |  |
| 46       | R           |    |         |         |      |   | R                                |  |  |  |
| 47       | Α           |    |         |         |      |   | A                                |  |  |  |
| 48<br>49 | A<br>V      |    |         |         |      |   | Y<br>T                           |  |  |  |
| 49       | Ŧ           |    |         |         |      |   |                                  |  |  |  |
| 50       | E           |    |         |         |      |   | E                                |  |  |  |
| 51       | L           |    |         |         |      |   | <u> </u>                         |  |  |  |
| 52       | G<br>R      |    |         |         |      |   | G I                              |  |  |  |
| 53       | R           |    |         |         |      |   | <u>Б</u>                         |  |  |  |
| 54       | P           |    |         |         |      |   | Р                                |  |  |  |
| 55       | A           | D  | ٤       |         |      |   | ()                               |  |  |  |
| 56       | Α           | E  |         |         |      |   | ()                               |  |  |  |
| 57       | D           | E  |         |         |      |   | <u>C</u><br>EE                   |  |  |  |
| 58       | Y           |    |         |         |      |   | Y                                |  |  |  |
| 59       | W           |    |         |         |      |   | W                                |  |  |  |
| 60       | N<br>S      |    |         |         |      |   | N                                |  |  |  |
| 61       | s           |    |         |         |      |   | N<br>S                           |  |  |  |
| 62       | Q           |    |         |         |      |   | Q                                |  |  |  |
| 63       | K           |    |         |         |      |   | К                                |  |  |  |
| 64       | D<br>F      |    |         |         |      |   | Ð                                |  |  |  |
| 65       | F           | i  | Ļ       |         |      |   | ()                               |  |  |  |
| 66       | L           |    |         |         |      |   | 1.                               |  |  |  |
| 67       | Ε           |    |         |         |      |   | Ë                                |  |  |  |
| 68       | E           |    |         |         |      |   | <u> </u>                         |  |  |  |
| 69       | E           | K  |         |         |      |   | 0                                |  |  |  |
| 70       | R           |    |         |         |      |   | Ř                                |  |  |  |
| 71       | Α           |    |         |         |      |   | A                                |  |  |  |
| 72       | V           |    |         |         |      |   | V                                |  |  |  |
| 73       | ₽           |    |         |         |      |   | P                                |  |  |  |
| 74       | D<br>R      |    |         | I       |      |   | D                                |  |  |  |
| 75       | R           |    |         |         |      |   | R                                |  |  |  |
| 76       | 1 1         | M  | V       |         |      |   | R<br>H                           |  |  |  |
| 76<br>77 | Ċ           |    |         |         |      |   | C                                |  |  |  |
| 78       | R           |    |         |         |      |   | R                                |  |  |  |
| 79       | Н           |    |         |         |      |   | H                                |  |  |  |
| 80       |             |    |         |         |      |   | N                                |  |  |  |
| 81       | N<br>Y      |    |         |         |      |   | N<br>Y                           |  |  |  |
| 82       | E           |    |         |         |      |   | Ë                                |  |  |  |
| 83       | L           |    |         | 1       |      |   | ì.                               |  |  |  |
| 84       | ō           | G  |         | <b></b> |      |   | GG                               |  |  |  |
| 85       | E           | G  |         | <b></b> |      | 1 | GG                               |  |  |  |
| 86       | A           | Þ  |         |         |      | 1 | MM                               |  |  |  |
| 86<br>87 | M           | Ÿ  |         |         |      |   | MM                               |  |  |  |
| 88       | A<br>M<br>T |    |         |         |      |   | MM3<br>T                         |  |  |  |
| 89       | L           |    |         | <b></b> |      |   | Ĺ.                               |  |  |  |
| 1        | ·····       |    |         | 1       |      | J |                                  |  |  |  |

Fig. 117

| Position |        | Di | verse A | mino Ad | oid | <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del> | Amino Acid Configuration<br>With Less Tendency to Malignancy |
|----------|--------|----|---------|---------|-----|--|--|
| 90       | Q      |    |         |         |     | 1  | Q  |
| 91       | Ř      |    |         |         |     |  | R  |
| 92       | R      |    |         |         |     |  | R<br>R   |
| 93       | V      |    |         |         |     |  | V V  |
| 94       | Q      |    |         |         |     |  | Q  |
| 95       | P      |    |         |         |     |  | P  |
| 96       | К      | R  |         |         |     |  | ()   |
| 97       | V      |    |         |         |     |  | V  |
| 98       | N      |    |         |         |     |  | N  |
| 99       | V<br>S |    |         |         |     |  | V  |
| 100      |        |    |         |         |     |  | \$   |
| 101      | P      |    |         |         |     |  | P  |
| 102      | S      |    |         |         |     |  | S  |
| 103      | K      |    |         |         |     |  | K  |
| 104      | K      |    |         |         |     |  | K  |
| 105      | G      |    |         |         |     |  | G  |
| 106      | P      |    |         |         |     |  | þ  |
| 107      | Į,     |    |         |         |     |  | Ĺ.   |
| 108      | Q      |    |         |         |     |  | Q  |
| 109      | H      |    |         |         |     |  | H  |
| 110      | H      |    |         |         |     |  | <del>)  </del>   |
| 111      | N      |    |         |         |     |  | N  |
| 112      | L      |    |         |         |     |  | Ĺ  |
| 113      | L      |    |         |         |     |  | Ĺ  |
| 114      | V      |    |         |         |     |  | V  |
| 115      | С      |    |         |         |     |  | C  |
| 116      | Н      |    |         |         |     |  | H  |
| 117      | V      |    |         |         |     |  | V  |
| 118      | T      |    |         |         |     |  | Ţ  |
| 119      | ם      |    |         |         |     |  | D  |
| 120      | ۴      |    |         |         |     |  | F  |
| 121      | Y      |    |         |         |     |  | Y  |
| 122      | P      |    |         |         |     |  | P  |
| 123      | G      |    |         |         |     |  | G  |
| 124      | S      |    |         |         |     |  | S  |
| 125      | 1      |    |         |         |     |  |  |
| 126      | Q      |    |         |         |     |  | Q  |
| 127      | У      |    |         |         |     |  | V  |
| 128      | R      |    |         |         |     |  | R  |
| 129      | W      |    |         |         |     |  | W  |
| 130      | F      |    |         |         |     |  | F  |
| 131      | L.     |    |         |         |     |  | Ĺ.   |
| 132      | N      |    |         |         |     |  | N  |
| 133      | G      |    |         |         |     | ļ  | G  |
| 134      | Q<br>E |    |         |         |     |  | Q  |
| 135      |        |    |         |         |     | ļ  | E  |
| 136      | E      |    |         |         |     |  | E  |
| 137      | T      |    |         |         |     |  | Ť  |
| 138      | Α      |    |         |         |     |  | A  |
| 139      | G      |    |         |         |     |  | G  |
| 140      |        |    |         |         |     |  | V  |
| 141      | V      |    |         |         |     |  | V  |
| 142      | S<br>T |    |         |         |     |  | S<br>T   |
| 143      | T      |    |         |         |     |  | Ť  |
| 144      | N      |    |         |         |     |  | N  |
| 145      | Ĺ      |    |         |         |     |  | Ĺ  |
| 146      | 1      |    |         |         |     |  | 1  |
| 147      | R      |    |         |         |     |  | R  |
| 148      | N      |    |         |         | L   | L  | N  |

Fig. 118

| Position |        | Di | verse A | mino Ad  | old | ······································ | Amino Acid Configuration<br>With Less Tendency to Malignancy |
|----------|--------|----|---------|----------|-----|--|--|
| 149      | G      |    |         | 1        |     |  | G  |
| 150      | Ď      |    |         | <b> </b> |     |  | Ö  |
| 151      | W      |    |         |          |     |  | D<br>W   |
| 152      | T      |    |         | 1        |     |  | Ť  |
| 153      | F      |    |         | <b></b>  |     |  | F  |
| 154      | Q      |    |         |          |     |  | Q  |
| 155      |        |    |         |          |     |  | 1  |
| 156      | L.     |    |         |          |     |  | Į,   |
| 157      | V      |    |         |          |     |  | V  |
| 158      | M      |    |         |          |     |  | M  |
| 159      | L      |    |         |          |     |  |  |
| 160      | E      |    |         |          |     |  | TI TI  |
| 161      | M      |    |         |          |     |  | M  |
| 162      | Ŧ      |    |         |          |     |  | Ϋ́   |
| 163      | P      |    |         |          |     |  | P  |
| 164      | Q      |    |         |          |     |  | Q  |
| 165      | Q      |    |         |          |     |  | Q  |
| 166      | G      |    |         |          |     |  | G  |
| 167      | Q      |    |         |          |     |  | O  |
| 168      | V      |    |         |          |     |  | V  |
| 169      | Y      |    |         |          |     |  | Y  |
| 170      | ı      | Ŧ  |         |          |     |  | ()   |
| 171      | C      |    |         |          |     |  | C  |
| 172      | Q      |    |         |          |     |  | Q  |
| 173      | V      |    |         |          |     |  | V  |
| 174      | E      |    |         |          |     |  | E  |
| 175      | Н      |    |         |          |     |  | H  |
| 176      | T      |    |         |          |     |  | Ŧ  |
| 177      | S      |    |         |          |     |  | \$   |
| 178      | L.     | M  |         |          |     |  | ()   |
| 179      | D      |    |         |          |     |  | Ď  |
| 180      | S      |    |         |          |     |  | D<br>S   |
| 181      | P      |    |         |          |     |  | Р  |
| 182      | V      |    |         |          |     |  | V  |
| 183      | 7      |    |         |          |     |  | Ţ  |
| 184      | V      |    |         |          |     |  | V  |
| 185      | E      |    |         |          |     |  | E  |
| 186      | W      |    |         |          |     |  | W  |
| 187      | ĸ      |    |         |          |     |  | К  |
| 188      | Α      |    |         |          |     |  | A  |
| 189      |        |    |         |          |     |  | Q  |
| 190      | Q<br>S |    |         |          |     |  | \$   |
| 191      | D      |    |         |          |     |  | Ö  |
| 192      | S      |    |         |          |     |  | Š  |
| 193      | Α      |    |         |          |     |  | A  |
| 194      | R      |    |         |          |     |  | R  |
| 195      | S      |    |         |          |     |  | \$   |
| 196      | К      |    |         |          |     |  | K  |
| 197      | T      |    |         |          |     |  | Ţ  |
| 198      | Ļ      |    |         |          |     |  | Ļ  |
| 199      | T      |    |         |          |     |  | T  |
| 200      | G      |    |         |          |     |  | G  |
| 201      | Α      |    |         |          |     |  | A  |
| 202      | A<br>G |    |         |          |     |  | A<br>G   |
| 203      | G      |    |         |          |     |  | G  |
| 204      | F      |    |         | 1        |     |  | F  |
| 205      | V      |    |         |          |     |  | V  |
| 206      | L      |    |         |          |     |  | Ł  |
| 207      | G      |    |         |          |     |  | G  |
|          |        |    |         |          |     |  |  |

Fig. 119

| Position |    | Diverse Amino Acid | Amino Acid Configuration With Less Tendency to Malignancy |
|----------|----|--------------------|---|
| 208      | L. |                    | L.  |
| 209      |    |                    |   |
| 210      |    |                    | 1   |
| 211      | C  |                    | C   |
| 212      | G  |                    | G   |
| 213      | V  |                    | V   |
| 214      | G  |                    | G   |
| 215      |    |                    |   |
| 216      | F  |                    | F   |
| 217      | M  |                    | M   |
| 218      | H  |                    | H   |
| 219      | R  |                    | R   |
| 220      | R  |                    | R   |
| 221      | S  |                    | S   |
| 222      | K  |                    | K   |
| 223      | K  |                    | K   |
| 224      | У  |                    | V   |
| 225      | Q  |                    | Q   |
| 226      | R  |                    | R   |
| 227      | G  |                    | 0   |
| 228      | S  |                    | S   |
| 229      | Α  |                    | A   |

Fig. 120

| Position                                | <b></b>  | Di   | verse A | mino Ac | id                                      |         | Amino Acid Configuration         |
|---|----------|--|---------|---------|---|---------|----------------------------------|
| 37                                      | 9.8      |  |         | 1       |   |         | With Less Tendency to Malignancy |
| 32                                      | M        |  |         |         |   |         | <u>Z</u>                         |
| 31<br>_30                               |          |  |         |         |   |         |                                  |
| 29                                      | K        |  |         |         |   |         | W<br>K                           |
|   |          |  |         |         |   |         |                                  |
| 28                                      | K        |  |         |         |   |         | K                                |
| 27                                      | Α        | S  | ļ       |         |   | ļ       | <u> </u>                         |
| 26                                      | <u></u>  |  | ļ       |         |   |         | <u>.</u>                         |
| 25                                      | R        |  | ļ       |         |   |         | R                                |
| 24                                      | l<br>P   |  |         |         |   |         |                                  |
| 23                                      | , P      |  |         |         |   |         | p                                |
| _22                                     | G        |  |         |         |   |         | G                                |
| 21                                      | D        | G  |         |         |   |         | <u>Q</u>                         |
| 20                                      | <u></u>  |  |         |         |   |         |                                  |
| 19                                      | R        |  |         |         |   |         | R                                |
| 18                                      | Α        | V  |         |         |   |         | 0                                |
| _17                                     | Α        |  |         |         |   |         | A                                |
| 16                                      | T        |  |         |         |   |         | Ţ                                |
| 15                                      | V        |  |         |         |   |         | V                                |
| _14                                     | Ŧ        |  |         |         |   |         | Ť                                |
| 13                                      | L        |  |         |         |   |         |                                  |
| _12                                     | M        |  |         |         |   |         | M                                |
| _11                                     | L        |  |         |         |   |         | 4                                |
| 10                                      | Α        | S  |         |         |   |         | ()                               |
| _9                                      |          | М  |         |         |   |         | ()                               |
| 8                                       | L        |  |         |         | *************************************** |         | <u>}</u>                         |
| 7                                       | S        |  |         |         | ***********                             |         | S                                |
| _6                                      | S        | T  |         |         | ***********                             |         | $\odot$                          |
| _5                                      | L        | Р  | S       |         | *************************************** |         | v)                               |
| 4                                       | L        | ٧  |         |         | *************************************** |         | ý<br>()                          |
| _3                                      | A        |  |         |         |   |         |                                  |
| 2                                       | E        |  |         |         |   |         | 4<br>E<br>G                      |
| 1                                       | E<br>G   |  |         |         |   |         | G                                |
| 1                                       | Ř        |  |         |         | *************************************** |         | Ř                                |
| 2                                       | Ď        |  |         |         | *************************************** |         | Ď                                |
| 3                                       | 9        | S  |         |         |   |         |                                  |
| 4                                       | P        |  |         |         | ***********                             |         | O<br>P                           |
| 5                                       | È        |  |         |         |   |         | E                                |
| 6                                       | ס        |  |         |         |   | ·····   | D D                              |
| 7                                       | F        |  |         |         |   | ·····   | £                                |
| 8                                       | V        |  |         |         |   |         | V                                |
| 9                                       | F        | ,  |         |         |   |         |                                  |
| 10                                      | Q        | <u>.                                    </u> | Y       |         |   |         | SC .                             |
|   | F        |  |         |         |   |         | G<br>F                           |
| 11<br>12                                | K        |  | ļ       | ļ       | <b></b>                                 | ļ       |                                  |
|   |          | <u> </u>                                     | ļ       |         | <b></b>                                 | ļ       | K 2                              |
| 13                                      | <u> </u> | G  |         |         |   |         | <u> </u>                         |
| 14                                      | Ļ        | M  |         | ļ       | L                                       | <b></b> | Q                                |
| 15                                      | C        |  |         |         |   | ļ       | C<br>Y                           |
| 16                                      | Y        |  |         |         | ,                                       |         | <u> </u>                         |
| 17                                      | ۴        |  |         |         |   |         | F<br>T                           |
| 18                                      | T        |  |         |         |   |         | Ţ                                |
| 19                                      | N        |  |         |         |   |         | N                                |
| 20                                      | G        |  |         |         |   |         | G                                |
| 21                                      | T        |  |         |         |   |         | Ť                                |
| 22                                      | E        |  |         |         |   |         | £                                |
| 23                                      | L        | R  |         |         |   |         | ()                               |
| 24                                      | V        |  |         |         |   |         | ٧                                |
| 24<br>25                                | R        |  |         |         |   |         | R                                |
| 26                                      | G        | L  | Y       |         |   |         | ()                               |
| 27                                      | У        |  |         |         |   |         | Ÿ                                |
| *************************************** |          |  |         |         |   |         | ·                                |

Fig. 121

| Position |         | Di       | verse A      | mino Ad      | oid |   | Amino Acid Configuration<br>With Less Tendency to Malignancy |
|----------|---------|----------|--------------|--------------|-----|---|--|
| 28       | S       | T        |              |              |     |   | S or ()  |
| 29       | Ř       |          |              | <b></b>      |     |   | R  |
| 30       | Н       | S        | Y            |              |     |   | ()   |
| 31       |         |          |              |              |     |   | ······   |
| 32       | Ÿ       |          |              |              |     |   | Ÿ  |
| 33       | N       |          |              |              |     |   | N  |
| 34       | R       |          |              |              |     |   | Ř  |
| 35       | E       |          |              |              |     |   | E  |
| 36       | E       |          |              |              |     |   | E  |
| 37       | D       | 1        | Y            |              |     |   | ()   |
| 38       | A       | V        |              |              |     |   | ()   |
| 39       | R       |          |              |              |     |   | R  |
| 40       | F       |          |              |              |     |   | F  |
| 41       | D       |          |              |              |     |   | D  |
| 42       | S       |          |              |              |     |   | S  |
| 43       | D       |          |              |              |     |   | D  |
| 44       | У       |          |              |              |     |   | V  |
| 45       | Æ       | G        |              |              |     |   | 0  |
| 46       | Æ       | V        |              |              |     |   | ()   |
| 47       | F       | Υ        |              |              |     |   | Ġ.   |
| 48       | R       |          |              |              |     |   | R  |
| 49       | A       |          |              |              |     |   | Α  |
| 50       | V       |          |              |              |     |   | V  |
| 51       | T       |          |              |              |     |   | Ť  |
| 52       | L       | P        |              |              |     |   | ()   |
| 53       | L       | Q        |              |              |     |   | <u>()</u>  |
| 54       | G       |          |              |              |     |   | G  |
| 55       | L       | Р        | R            |              |     |   | ()   |
| 56       | L       | þ        |              |              |     |   | 0  |
| 57       | A       | D        | \$           | V            |     |   | ()   |
| 58       | A<br>E  |          |              |              |     |   | A<br>E   |
| 59       | E       |          |              |              |     |   |  |
| 60       | Y       |          |              |              |     |   | Y  |
| 61       | W       |          |              |              |     |   | W  |
| 62       | N       |          |              |              |     |   | N  |
| 63       | S       |          |              |              |     |   | S  |
| 64       | Q       |          |              |              |     |   | Q  |
| 65       | K       |          |              |              |     |   | K  |
| 66       | ņ       | E<br>V   |              |              |     |   | ()   |
| 67       | 1       | V        |              |              |     |   | ()   |
| 68       | <u></u> |          |              |              |     |   | <u> </u>   |
| 69<br>70 | E       |          | R            |              |     |   | Ę<br>,,  |
| 71       | Ā       | G<br>D   | K            | T            |     |   | <u> </u>   |
| 72       | R       | <u> </u> | <del> </del> | <del> </del> |     |   | ()<br>R  |
| 73       | A       |          |              |              |     |   | Ä  |
|          |         | =        | -            |              |     |   |  |
| 74<br>75 | A<br>L  | E<br>V   | \$           |              |     |   | 9  |
| 76       | D       | · ·      |              |              |     |   | Ú<br>O   |
| 77       | R       | T        |              |              |     |   | Ö Ö  |
| 78       | V       |          |              |              |     |   | V  |
| 79       | č       |          |              |              |     |   | Ċ  |
| 80       | Ř       |          |              |              |     |   | Ř  |
| 81       | H       |          |              |              |     |   | H  |
| 82       | N       |          |              |              |     |   | N N  |
| 83       | Ÿ       |          |              |              |     |   | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                       |
| 84       | E       | Q        |              |              |     |   | Ö  |
| 85       | L       | V        |              |              |     |   | ()   |
| 86       | Ā       | E        | G            | <b> </b>     | -   |   | V/<br>EG   |
| £        |         | ټ        | L            | 1            | 1   | E | r  |

Fig. 122

| Position   |             | Di     | verse A | mino Ac       | id           |         | Amino Acid Configuration<br>With Less Tendency to Malignancy |
|------------|-------------|--------|---------|---------------|--------------|---------|--|
| 87         | F           | L      | Υ       |               |              |         | ()   |
| 88         | R           |        |         |               |              |         | Ř  |
| 89         | G           | Ť      |         |               |              |         | ()   |
| 90         | 1           | T      |         |               | ************ |         | ()   |
| 91         | L.          |        |         |               |              |         | į.   |
| 92         | Q           |        |         |               |              |         | Q  |
| 93         | R           |        |         |               |              |         | R  |
| 94         | R           |        |         |               |              |         | R  |
| 95         | V<br>E<br>P |        |         |               |              |         | У<br><u>Е</u><br>Р   |
| 96         | E           |        |         |               |              |         | E  |
| 97         |             |        |         |               |              |         |  |
| 98         | T           |        |         |               |              |         | Ť  |
| 99         | V           |        |         |               |              |         | V  |
| 100        | T           |        |         |               |              |         | Ţ  |
| 101        | 1           |        |         |               |              |         | 1  |
| 102        | S           |        |         |               |              |         | S  |
| 103        | þ           |        |         |               |              |         | P  |
| 104        | S           |        |         |               |              |         | S  |
| 105        | R           |        |         |               |              |         | R  |
| 106        | T           |        |         |               |              |         | Ť  |
| 107        | E           |        |         | 11            |              |         | E  |
| 108        | A           |        |         |               |              |         | A  |
| 109        | L L         |        |         |               |              |         | Ł  |
| 110        | N           |        |         |               |              |         | N  |
| 111        | Н           |        |         |               |              |         | <b>进</b>   |
| 112        | H           |        |         |               |              |         | <del>)  </del>   |
| 113        | N           |        |         |               |              |         | Ŋ  |
| 114        | L           |        |         |               |              |         | L.   |
| 115        | L           |        |         |               |              |         | <u>L</u>   |
| 116        | 1           | ٧      |         |               |              |         | Ω  |
| 117        | Ç<br>S      |        |         |               |              |         | C<br>S   |
| 118        | 5           |        |         |               |              |         | S  |
| 119        | V           |        |         |               |              |         | <u>V</u>   |
| 120        | Ţ           |        |         |               |              |         | Ţ  |
| 121        | D<br>F      |        |         |               |              |         | D<br>F   |
| 122        |             |        |         | ļ             |              |         |  |
| 123        | Ä           |        |         |               |              |         | Y  |
| 124        | P           |        |         | 1             |              |         | ρ  |
| 125        | <u> </u>    | G<br>Q | S       | <del> </del>  |              |         | ()   |
| 126        | H           | (J)    |         |               |              |         | <u>()</u>  |
| 127        | K           |        |         | <del> </del>  |              |         | i<br>K   |
| 128<br>129 | V           |        |         | <del> </del>  |              |         | Ÿ  |
| 130        | à           | R      |         | <del> </del>  |              |         |  |
| 131        | W           |        |         | <del> </del>  |              |         | W W  |
| 132        | F           |        |         | <del> </del>  |              |         | F F  |
|            |             |        |         |               |              |         |  |
| 133<br>134 | R           |        |         | 1             |              |         | R<br>N   |
| 135        | D           |        |         |               | **********   |         | р<br>С   |
| 136        | Q           |        |         | <del>  </del> |              |         | Q  |
| 137        | E .         |        |         | 1             |              | <b></b> |  |
| 138        | E           |        |         | <del> </del>  |              |         | EZ.  |
| 139        | T           |        |         | <del>  </del> |              |         | E<br>E<br>T  |
| 140        | À           | Ŧ      |         | <del> </del>  |              |         |  |
| 141        | G           |        |         | <del>  </del> |              |         | G  |
| 142        | V           |        |         | <del>  </del> |              |         | \frac{9}{\tau}   |
| 143        | V           |        |         | <del>  </del> |              |         | V  |
| 144        | S           |        |         | 1             |              |         | S  |
| 145        | T           |        |         | 1             |              |         | S<br>T   |
| 145        | 1           | L      | L       | 11            |              | £       |  |

Fig. 123

| Position   |              | Di | verse A | mino Ad | old | <br>Amino Acid Configuration<br>With Less Tendency to Malignancy |
|------------|--------------|----|---------|---------|-----|--|
| 146        | р            |    |         |         | 1   | P P  |
| 147        | i            |    |         |         |     | <br>į.   |
| 148        |              |    |         |         |     |  |
| 149        | Ŕ            |    |         |         |     | <br>R  |
| 150        | N            |    |         |         |     | <br>N  |
| 151        | G            |    |         |         |     | <br>G  |
| 152        | D            |    |         |         |     | D  |
| 153        | W            |    |         |         |     | W  |
| 154        | T<br>F       |    |         |         |     | Ţ  |
| 155        | F            |    |         |         |     | F  |
| 156        | Q            |    |         |         |     | Q  |
| 157        | į.           |    |         |         |     |  |
| 158        | L.           |    |         |         |     | <br>i,   |
| 159        | <u> </u>     |    |         |         |     | <br>ν  |
| 160        | M            |    |         |         |     | <br>M  |
| 161        | L            |    |         |         |     | <br><u>L</u>   |
| 162        | Ε            |    |         |         |     | <br>E  |
| 163        | M            |    |         |         |     | <br><u>M</u>   |
| 164        | T            |    |         |         |     | <br><u>†</u>   |
| 165        | Р            |    |         |         |     | <br>Р  |
| 166        | Q            |    |         |         |     | <br>Q  |
| 167        | <u>H</u>     | R  |         |         |     | <br><u>()</u>  |
| 168        | G            |    |         |         |     | <br>G  |
| 169        | <u>D</u>     |    |         |         |     | <br><u>D</u><br>V  |
| 170        | V            |    |         |         |     | <br>Ÿ  |
| 171        | Y            |    |         |         |     |  |
| 172        |              |    |         |         |     | <br>Ţ  |
| 173<br>174 | C            |    |         |         |     | <br>О<br>Н   |
| 175        | H<br>V       |    |         |         |     | n<br>V   |
| 176        |              |    |         |         |     | <br>v<br>E   |
| 177        | E<br>H       |    |         |         |     | <br><u>u</u><br>H  |
| 178        | <del>p</del> |    |         |         |     | <br>P  |
| 179        | s            |    |         |         |     | <br>S  |
| 180        | l Č          |    |         |         |     | <br>L  |
| 181        | ā            |    |         |         |     | <br>ā  |
| 182        | N            | S  |         |         |     | <br>Ü  |
| 183        | p            |    |         |         |     | <br>Ř  |
| 184        |              |    |         |         |     | 1  |
| 185        |              | Ŧ  |         |         |     | <br>()   |
| 186        | V            |    |         |         |     | ν  |
| 187        | E            |    |         |         |     | E  |
| 188        | W            |    |         |         |     | W  |
| 189        | R            |    |         |         |     | R  |
| 190        | Α            |    |         |         |     | A  |
| 191        | Q            |    |         |         |     | Q  |
| 192        | S            |    |         |         |     |  |
| 193        | E            |    |         |         |     | <i>о</i>   |
| 194        | S            |    |         |         |     | 5  |
| 195        | Α            |    |         |         |     | A  |
| 196        | Q            |    |         |         |     | Q  |
| 197        | N            | S  |         |         |     | ()   |
| 198        | К            |    |         |         |     | K  |
| 199        | M            |    |         |         |     | <br>M  |
| 200        | L            |    |         |         |     | <br><u> </u>   |
| 201        | S            |    |         |         |     | <br>9  |
| 202        | G            |    |         |         |     | <br>G  |
| 203        | 1            | V  |         |         |     | <br>⟨⟩   |
| 204        | G            | L  |         |         |     | G  |

Fig. 124

| Position |     | D | iverse Amino A | old | Amino Acid Configuration With Less Tendency to Malignancy |
|----------|-----|---|----------------|-----|---|
| 205      | G   |   |                |     | G G   |
| 206      | F   |   |                |     | F   |
| 207      | ٧   |   |                |     | V   |
| 208      | L   |   |                |     | L.  |
| 209      | G   |   |                |     | G   |
| 210      | L   |   |                |     | L.  |
| 211      | 1   |   |                |     | 1   |
| 212      | F   |   |                |     | F   |
| 213      | L   |   |                |     | <u> </u>  |
| 214      | G   |   |                |     | G   |
| 215      | L   |   |                |     | L.  |
| 216      | G   |   |                |     | G   |
| 217      | L.  |   |                |     | L.  |
| 218      | 1   |   |                |     |   |
| 219      | 1   |   |                |     | <u> </u>  |
| 220      | 1-1 | R |                |     | ()  |
| 221      | Н   | a |                |     | ()  |
| 222      | R   |   |                |     | R   |
| 223      | \$  |   |                |     | \$  |
| 224      | Q   | R |                |     | ()  |
| 225      | K   |   |                |     | К   |
| 226      | G   |   |                |     | G   |
| 227      | P   |   |                |     | P   |
| 228      | Q   |   |                |     | Q   |
| 229      | G   |   |                |     | G   |
| 230      | Þ   |   |                |     | P   |
| 231      | þ   |   |                |     | P   |
| 232      | þ   |   |                |     | Р   |
| 233      | Α   |   |                |     | A   |
| 234      | G   |   |                |     | G   |
| 235      | Ļ   |   |                |     | L.  |
| 236      | L   |   |                |     | <u>L</u>  |
| 237      | H   |   |                |     | į-t   |

Fig. 125

| Position  |          | Div       | erse A         | mino /       | Acid         |               | Amino Acid Configuration to<br>Inhibit Metastases | Amino Acid Configuration to Inhibit<br>Metastases |
|-----------|----------|-----------|----------------|--------------|--------------|---------------|---|---|
| _29       | M        |           |                |              |              |               | M   | M   |
| _28       | V        |           |                |              |              |               | V   | V   |
| 27        | C        |           |                |              |              |               | C   | Ċ   |
| _26       | Ť        |           |                | ·            | ·            | <del> </del>  | Ī   | į į   |
| _25       | ĸ        | R         |                |              |              |               |   |   |
| 24        | F        |           |                |              |              | ļ             | <u>Q</u>  | <u>Q</u>  |
|           |          | L         |                | ļ            |              | ļ             | <u>Q</u>  | <u>Q</u>  |
| 23        | Ъ        |           |                |              |              | ļ             | P   | P   |
| 22        | Ģ        |           |                |              |              | ļ             | G   | G   |
| _21       | G<br>S   | L         |                | <u> </u>     |              | l             | G<br>S  | G<br>S  |
| _20       | S        |           |                |              |              |               | S   | \$  |
| 19        | C        |           |                |              |              |               | ¢   | ¢   |
| 18        | M        | ********* |                |              |              |               | M   | M   |
| 17        | A        | Ŧ         |                |              | ·            | <del> </del>  | 0   | Ö   |
|           |          | Ý         |                |              | ļ            | <del> </del>  |   |   |
| 16        | <u> </u> |           |                |              |              | ļ             | ρ   | Ω   |
| _15       | L        |           |                |              |              | ļ             | <u>L</u>  | <u>L</u>  |
| 14        | T        |           |                |              |              | ļ             | Ţ   | Ī   |
| _13       | V        |           |                |              |              |               | V   | V   |
| _12       | T        |           |                |              |              |               | 7   | 7   |
| 11        | L        |           |                | T            |              |               | L   | Į.  |
| 10        | M        |           | <b> </b>       | <u> </u>     | <b>†</b>     | l             | M   | M   |
| 9         | V        |           | <b> </b>       | <b>!</b>     | <b>†</b>     | <b>!</b>      | Ÿ   | Ÿ   |
|           |          |           |                |              | <del> </del> |               | <del></del>                                       | · <del>-</del>                                    |
| 8         | ř        |           |                | ļ            | <b></b>      | ļ             | <u>L</u>  | <u></u>   |
| 7         | S        |           |                |              | ļ            | ļ             | S   | S   |
| _6        | S        |           |                |              |              | L             | S<br>P  | \$<br>F   |
| _5        | Ρ        |           |                |              |              |               | P   | P   |
| 4         | L        |           |                |              |              |               | L   | Ł.  |
| _3        | A        |           |                |              |              |               | A   | A   |
| 2         | L        |           |                |              | <b></b>      | <b>†</b>      | L   | L.  |
| 1         | Ã        | S         |                | <del> </del> | <del> </del> | <del> </del>  |   | Ō   |
|           | G        |           |                |              |              | ļ             | Ŏ   | <u> </u>  |
| 1         |          |           |                | ļ            | <b>}</b>     | ļ             | <u> </u>  | G   |
| 2<br>3    | D        |           |                |              |              | ļ             | D   | D   |
| 3         | Ť        |           |                |              |              | L             | T   | Ť   |
| 4         | Q        | R         |                |              |              | l             | · · · · · · · · · · · · · · · · · · ·             | P   |
| 5         | P        |           |                |              |              |               | P   | P   |
| 6         | R        |           |                |              |              |               | R   | R   |
| 7         | F        |           |                |              |              | 1             | F   | F   |
| 8         | Ĺ        |           |                |              |              |               | Ĺ   | i.  |
| 9         | Ē        | к         | W              |              |              | ····          | Ō   | Ō   |
|           | <u>~</u> |           |                |              |              | ļ             |   |   |
| 10        | E        | Ö         | <u>Y</u>       | ļ <u>-</u>   |              | ļ <del></del> | <u> </u>  | Ω   |
| 11        | D        | G         | £.             | Р            | \$           | V             | <u>Q</u>  | <u>Q</u>  |
| 12        | K        | T         |                |              |              |               | 0   | 0   |
| 13        | F        | G         | Н              | R            | S            | Y             | <u>()</u>   | FF or GR  |
| 14        | E        | K         |                | 1            |              |               | <del>\</del>                                      | ()  |
| 15        | C        |           |                | [            | Ī            | T             | Č   | C   |
| 16        | H        | Q         | Y              | T            | T            | T             | 0   | YY  |
| 17        | F        |           |                | ·            | ·            | <b> </b>      | ¥   | F   |
|           | F        |           |                | <del> </del> | <del> </del> | <del> </del>  |   |   |
| 18        |          | <b> </b>  |                | <del> </del> | <del> </del> | <del> </del>  | F   | F   |
| 19        | N        |           |                | ļ            | <b>!</b>     | ļ             | N   | N   |
| 20        | G        |           |                | ļ            | ļ            | ļ             | G   | G   |
| 21        | Τ        |           |                |              |              | L             | Ť   | Ţ   |
| 22        | ε        |           |                |              |              | 1             | E   | E   |
| 23        | R        |           |                | I            | 1            |               | E<br>R  | E<br>R  |
| 24        | V        |           | ·              | <u> </u>     | 1            | 1             | V   | V   |
| 25        | à        | R         |                |              | ·            | <b>†</b>      | Ö   | Ö   |
| <u>25</u> | F        | -;;       | Ψ              | <b></b>      | <del> </del> | <del> </del>  | <u> </u>  | <del>\</del>                                      |
| <u>~Q</u> | ·        |           | ļ <sup>r</sup> | ļ            |              |               | Q   | 9   |
| 27        | <u> </u> |           | ļ              | ļ            | ļ            | ļ             |   | L.  |
| 28        | D        | E         | Н              |              |              | ļ             | 0   | ()  |
| 29        | R        |           |                |              |              |               | R   | R   |
| 30        | C        | G         | Н              | L            | R            | Y             | ()  | ()  |
|           |          |           |                |              |              |               |   |   |

Fig. 126

| Position |          | Div          | erse A       | mino /       | Acid     |          | Amino Acid Configuration to<br>Inhibit Metastases | Amino Acid Configuration to Inhibit<br>Metastases |
|----------|----------|--------------|--------------|--------------|----------|----------|---|---|
| 31       | F        | 1            | V            |              |          |          | ()  | 0   |
| 32       | Н        | Y            |              |              |          |          | Ö   | Ö   |
| 33       | H        | N            |              |              |          |          | ()  | NN  |
| 34       | Q        |              |              |              |          |          | ä   | Q Q   |
| 35       | Ē        |              |              |              |          |          | <u> </u>  | Ē   |
| 36       | Ë        |              |              |              |          |          | E   | E   |
| 37       | F        | L            | N            | S            |          |          |   |   |
| 38       |          | <del></del>  | V            |              |          |          | Q   | <u>Q</u>  |
| 30       | A        | <u> </u>     | <u> </u>     |              |          |          | <u> </u>  | 0   |
| 39       | R        |              |              |              |          |          | R   | R   |
| 40       | <u> </u> | Y            |              |              |          |          | <u>Q</u>  | <u>Q</u>  |
| 41       | ò        |              |              |              |          |          | D   | D   |
| 42       | S        |              |              |              |          |          | S   | S   |
| 43       | D        |              |              |              |          |          | D   | D   |
| 44       | V        |              |              |              |          |          | V   | V   |
| 45       | G        |              |              |              |          |          | G   | G   |
| 46       | Ε        |              |              |              |          |          | E   | E   |
| 47       | F        | Y            |              | <b></b>      |          |          | ()  | 0   |
| 48       | R        | <del> </del> |              | <b></b>      |          |          | Ř   | Ŕ   |
| 49       | A        |              | -            |              |          |          | À   | Ä   |
| 50       | V        | <del> </del> | <del> </del> | <del> </del> | 1        |          | <del></del>                                       | Ŷ   |
| 51       | Ť        | <del> </del> | <b> </b>     | <del> </del> |          |          | Ť   | Ť   |
|          |          |              |              | ļ            |          |          |   |   |
| 52       | E        |              | ļ            | ļ            |          |          | E   | E   |
| 53       | L        |              |              |              |          |          | L   | L   |
| 54       | G        |              |              | <u> </u>     |          |          | G   | G   |
| 55       | R        |              |              |              |          |          | R   | R   |
| 56       | Р        |              |              |              |          |          | P   | P   |
| 57       | Α        | D            | 5            | V            |          |          | ()  | ()  |
| 58       | Α        | ε            |              |              |          |          | Ö   | Ŏ   |
| 59       | E        |              |              |              |          |          | Ě   | Ě   |
| 60       | H        | s            | Υ            |              |          |          | 0   | Ō   |
| 61       | W        |              |              | <u> </u>     |          |          | Ŵ   | Ŵ   |
| 62       | N        |              |              |              |          |          | N   | N N   |
| 63       | S        | <del> </del> | <b></b>      | ·····        |          |          | <u> </u>  | S S   |
| 64       |          |              |              |              |          |          |   |   |
|          | Q        |              |              |              |          |          | Q   | Q   |
| 65       | K        |              |              |              |          |          | <u>K</u>  | K   |
| 66       | D        |              |              | ļ            |          |          | D   | D   |
| 67       | F        | 1            | L            |              |          |          | 0   | 0   |
| 68       | L        |              |              |              |          |          | L   | L   |
| 69       | E        |              |              |              |          |          | £).   | E   |
| 70       | E<br>D   | Q            | ₽            |              |          |          | ()  | ()  |
| 71       | Α        | E            | K            | R            |          |          | ()  | ()  |
| 72       | R        | 1            | 1            |              |          |          | Ř   | R   |
| 73       | A        | G            |              | [            | T        |          | ()  | ()  |
| 74       | A        | E            | L.           | Q            | R        |          | Ó   | Ó   |
| 75       | T V      |              |              | <u> </u>     | 1        |          | Ÿ   | <u> </u>  |
| 76       | Ď        | <del> </del> | 1            | <u> </u>     | <b> </b> |          | Ď   | Ď   |
| 77       | N        | Ŧ            | <b>!</b>     | <del> </del> | <b> </b> |          |   |   |
| 78       | V        | Ÿ            | <b></b>      | ļ            |          |          | 9   | 9   |
|          |          | 3            | -            | -            | -        |          | <u>0</u>  | 0   |
| 79       | <u>c</u> |              |              |              |          |          | O (   | <u>c</u>  |
| 80       | R        |              |              | ļ            |          |          | R   | R   |
| 81       | H        | <b></b>      |              |              |          |          | H   | H   |
| 82       | N        |              |              | L            |          |          | N   | N   |
| 83       | Y        | L            | L            | L            |          |          | Y   | Y   |
| 84       | G        |              | 1            |              |          |          | G   | G   |
| 85       | A        | V            | T            | T            |          |          | ()  | 0   |
| 86       | G        | V            | 1            |              |          |          | Ŏ   | Ŏ   |
| 87       | Ē        | <del></del>  | <b>!</b>     | <b></b>      |          |          | E   | É   |
| 88       | S        | <del> </del> |              |              |          |          | 8   | S   |
| 89       | F        | <b> </b>     | <del> </del> | <del> </del> | <b></b>  |          | <u> </u>  |   |
| 0.87     | 1 5      | i            | 1            | i            | t        | <b>.</b> | Į.  | į r   |

Fig. 127

| Position |          | Div          | erse A       | mino /       | Acid     | ······································ | Amino Acid Configuration to<br>Inhibit Metastases | Amino Acid Configuration to Inhibit<br>Metastases |
|----------|----------|--------------|--------------|--------------|----------|--|---|---|
| 90       | Ŧ        | 1            | 1            | <u> </u>     |          |  | Ţ   | T   |
| 91       | V        |              |              |              |          |  | V   | V   |
| 92       | à        |              | <b></b>      |              |          |  | V<br>Q  | V<br>Q  |
| 93       | Ř        |              |              | <del> </del> |          |  | Ř   | Ř   |
|          |          |              |              |              |          | ļ                                      |   |   |
| 94       | R        |              |              |              |          |  | R   | R   |
| 95       | V        |              |              |              |          |  | V   | У   |
| 96       | E        | Н            | Q            | Y            |          |  | ()  | 0   |
| 97       | Р        |              |              |              |          |  | P   | P   |
| 96       | ε        | K            |              |              |          |  | 0   | 0   |
| 99       | V        |              |              |              |          |  | V   | V   |
| 100      | V<br>T   |              |              |              |          |  | V<br>T  | V<br>T  |
| 101      | V        | <del> </del> | <b>!</b>     | <u> </u>     |          | ·                                      | · v   | · v   |
| 102      | Ÿ        | <del>}</del> |              |              |          |  | Ÿ   | † v   |
| *        |          | ļ            |              |              |          | ļ                                      |   |   |
| 103      | Р        |              |              |              |          | <u></u>                                | Р   | P   |
| 104      | Α        | S            | 1            | l            |          |  | 0   | ()  |
| 105      | K        |              | L            |              |          |  | K   | K   |
| 106      | T        |              |              |              |          |  | Υ   | Ť   |
| 107      | Q        |              |              |              |          |  | a   | a   |
| 108      | P        | 1            |              | <b></b>      |          | <b></b>                                | P   | P   |
| 109      | Ĺ        | <del> </del> | <b>!</b>     | <del> </del> | <b>!</b> | <b></b>                                | L.  | L.  |
|          |          | <del> </del> | <b> </b>     | <b></b>      | <b></b>  | <b></b>                                |   |   |
| 110      | Q        |              |              | <b>}</b>     |          |  | a   | Q   |
| 111      | H        | <b></b>      |              |              |          | <u></u>                                | H   | H   |
| 112      | Н        |              | l            | <u> </u>     |          |  | H   | H   |
| 113      | N        |              |              |              |          |  | N   | N   |
| 114      | L        |              |              |              |          |  | L   | Ł   |
| 115      | L        | *            | ·····        | ·····        |          |  | L   | L   |
| 116      | V        |              | ·            |              |          | ·                                      | V   | V V   |
| 117      | Č        |              | ļ            | <del> </del> |          |  | č   | č   |
|          | 1 =      | ļ            | ļ            | ļ            |          | <b></b>                                |   |   |
| 118      | S        | 1            | ļ            |              |          |  | S   | S   |
| 119      | ٧        |              | <b></b>      |              |          |  | V   | V   |
| 120      | N<br>F   | \$           | 1            | <u> </u>     |          | <u> </u>                               | ()  | ()  |
| 121      | F        |              |              |              |          |  | F   | F   |
| 122      | G        | ************ |              |              |          |  | G   | G   |
| 123      | Ÿ        | ······       | ·····        |              |          | ······                                 | Y   | Ÿ   |
| 124      | P        |              | <b></b>      |              |          |  | P   | P   |
| 125      | G        | <del> </del> |              |              | <b></b>  | <b></b>                                | Ğ   |   |
|          | <u> </u> |              |              | ļ            |          |  |   | Ğ   |
| 126      | \$       |              |              | ļ            |          | <u> </u>                               | Ŝ   | S   |
| 127      | 1        | 1            | 1            |              |          |  | l .   | }   |
| 126      | E        | 1            | l            |              |          |  | 9)  | E   |
| 129      | E<br>V   |              | ]            | [            |          |  | У   | У   |
| 130      | R        |              |              |              |          |  | R   | R   |
| 131      | W        | 1            |              | ·            |          |  | W   | W   |
| 132      | F        | <b>†</b>     |              | <b>†</b>     | <b>†</b> |  | F   | F   |
| 133      | i i      | R            |              | ·····        |          | <b></b>                                | <b></b>   | £   |
|          |          | <del> </del> |              |              | <b></b>  |  | <u> </u>  | <u> </u>  |
| 134      | N        | ļ            | ļ            |              |          | ļ                                      | N   | N N   |
| 135      | G        | <b></b>      | <b></b>      |              | ļ        | L                                      | G   | G   |
| 136      | Q        | L            | L            | L            |          | L                                      | Q   | Q   |
| 137      | E        | 1            | 1            | 1            |          |  | E   | E   |
| 138      | Æ        |              |              |              |          |  | Œ   | E   |
| 139      | K        | 1            |              |              | 1        |  | ĸ   | Ř   |
| 140      | A        | T            |              |              |          | <b></b>                                | A   | i a   |
| 141      | Ĝ        | <del> </del> | <del> </del> | ļ            | <b></b>  | <b></b>                                | <u>()</u>   | 0   |
|          |          | <del> </del> | ļ            | ļ            |          | <b></b>                                | 3   |   |
| 142      | M        |              | ļ            | ļ            |          | ļ                                      | Û   | Ω   |
| 143      | V        | <b></b>      | L            | L            | L        | <b></b>                                | V   | V   |
| 144      | S        |              |              |              |          |  | S   | S   |
| 145      | T        | 1            | 1            | ]            | 1        | [                                      | Ť   | S<br>T  |
| 146      | G        | 1            |              | <u> </u>     |          | <b></b>                                | G   | Ġ   |
| 147      | Ľ        | 1            | <b>!</b>     | <b> </b>     | 1        | <b></b>                                | Ĭ.  | Ĺ   |
|          | 1        |              | <b>!</b>     |              | -        | <b></b>                                | L I   | <u> </u>  |
| 148      | 1 1      | 1            | 3            | £            | £        | <b>\$</b>                              | }   | }   |

Fig. 128

| Position    | Diverse Amino Acid |              |                                       |   |  |            | Amino Acid Configuration to Inhibit<br>Metastases | Amino Acid Configuration to Inhibit<br>Metastases |  |
|-------------|--------------------|--------------|---------------------------------------|---|--|------------|---|---|--|
| 149         | н                  | Q            | <u> </u>                              |   |  |            | ()  | 0   |  |
| 150         | N                  |              | <b></b>                               |   |  |            | Ň   | Ni  |  |
| 151         | G                  |              |                                       |   |  |            | N<br>G  | N<br>G  |  |
| 152         | ŏ                  |              |                                       |   |  |            | Ď   | <u>S</u>  |  |
| 153         | W                  | <b></b>      |                                       |   |  |            | w   | <del></del>                                       |  |
|             |                    |              | ļ                                     |   |  |            |   |   |  |
| 154         | Ţ                  | ļ            | ļ                                     |   |  |            | Ţ   | Ī   |  |
| 155         | F                  | ļ            |                                       |   |  |            | F   | F   |  |
| 156         | Q                  |              |                                       |   |  |            | Q   | Q   |  |
| 157         | Ŧ                  |              |                                       |   |  |            | Ŧ   | Ţ   |  |
| 158         | L                  |              |                                       |   |  |            | L.  | Ę.  |  |
| 159         | , V                |              |                                       |   |  |            | V   | V   |  |
| 160         | M                  |              |                                       |   |  |            | M   | M   |  |
| 161         | L                  |              |                                       |   |  |            | <u> </u>  | <del>L</del>                                      |  |
| 162         |                    |              |                                       |   |  |            |   | Ë   |  |
| 163         | E                  |              |                                       |   |  |            | E   | <u>_</u>  |  |
| <del></del> |                    | ļ            | ļ                                     |   |  |            |   | <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>  |  |
| 164         | F                  | V            | ļ                                     |   | ļ                                      |            | <u>Q</u>  | <u> </u>  |  |
| 165         | р                  |              |                                       |   |  |            | Р   | P   |  |
| 166         | Q                  | R            | L                                     |   |  | L          | ()  | <u> </u>  |  |
| 167         | S                  |              | L                                     |   |  |            | s I   | \$  |  |
| 168         | G                  |              |                                       |   |  |            | G   | G   |  |
| 169         | ε                  |              |                                       |   |  |            | E   | E   |  |
| 170         | V                  | ·            | · · · · · · · · · · · · · · · · · · · |   |  |            | V   | ٧   |  |
| 171         | Ÿ                  |              |                                       |   |  | ·····      | Ý   | ······································            |  |
| 172         | Ť                  | ·····        | ·····                                 |   |  | ······     | Ť   | Ť   |  |
| 173         | ċ                  | <b></b>      |                                       |   |  |            | ċ   | Ċ   |  |
|             |                    | ļ            | <b></b>                               |   |  |            |   |   |  |
| 174         | Q                  |              | <b></b>                               |   |  |            | Q   | Ω   |  |
| 175         | Ą                  |              | <u></u>                               |   |  |            | V   |   |  |
| 176         | E                  |              | L                                     |   |  |            | Ë   | E   |  |
| 177         | H                  |              |                                       |   |  |            | H   | H   |  |
| 178         | Р                  |              |                                       |   |  |            | P   | ρ   |  |
| 179         | \$                 |              |                                       |   |  |            | \$  | 9   |  |
| 180         | L                  | V            |                                       |   |  |            | ()  | ()  |  |
| 181         | M                  | Ť            | <b>!</b>                              |   |  | ********** | ^   |   |  |
| 182         | S                  |              | <b>!</b>                              |   |  |            | ()<br>S   | <u>()</u>   |  |
| 183         | P                  |              |                                       |   |  |            | P   | p   |  |
| 184         |                    |              | <del> </del>                          |   |  |            |   |   |  |
|             | <u> </u>           | ļ            | ļ                                     |   |  |            | <u>F</u>  | <u> <u> </u></u>                                  |  |
| 185         | T                  |              | ļ                                     |   |  |            | Ť   | T   |  |
| 186         | V                  | ļ            | ļ                                     |   |  | ļ          | <u>V</u>  | <u>y</u>  |  |
| 187         | ε                  |              |                                       |   |  |            | E   | E<br>W  |  |
| 188         | W                  |              |                                       |   |  |            | W   |   |  |
| 189         | R                  | S            |                                       |   |  |            | ()  | ()  |  |
| 190         | A                  | [            | T                                     |   |  |            | À   | Α   |  |
| 191         | R                  | ·            | <b></b>                               |   |  |            | Ř   | Ř   |  |
| 192         | S                  | <b></b>      | <b></b>                               |   |  |            | Š   | S S   |  |
| 193         | Ĕ                  | <b></b>      | <b></b>                               |   |  | <b></b>    | i i i i i i i i i i i i i i i i i i i             |   |  |
| 194         | S                  | <del> </del> | ļ                                     |   |  | <b></b>    | E<br>S  | E<br>S  |  |
|             |                    | ļ            |                                       |   |  | <u> </u>   |   |   |  |
| 195         | A                  | ļ            | ļ                                     |   | ļ                                      | ļ          | A   | <u>A</u>  |  |
| 196         | Q                  |              |                                       |   |  | L          | Q   | Q   |  |
| 197         | S                  |              |                                       |   |  |            | Ş   | S   |  |
| 198         | K                  | L            |                                       |   |  |            | K   | K   |  |
| 199         | M                  |              |                                       |   |  |            | M   | M   |  |
| 200         | L                  |              | <u> </u>                              | · |  |            | L   | Ł   |  |
| 201         | ŝ                  |              | <b>!</b>                              |   |  | ·····      | Š   |   |  |
| 202         | Ğ                  |              | <del> </del>                          |   | <b> </b>                               | <b></b>    | S<br>G  | S<br>G  |  |
| 202         | V                  | ļ            | <b> </b>                              | ļ | ······································ | <b></b>    | v   | V   |  |
|             |                    |              |                                       |   |  |            |   |   |  |
| 204         | G                  | ļ            |                                       |   | ļ                                      | L          | G   | Ğ   |  |
| 205         | G                  | ļ            | ļ                                     |   | L                                      | ļ          | G   | Ğ   |  |
| 206         | F                  |              |                                       |   |  | ļ          | F   | F   |  |
| 207         | V                  |              |                                       |   |  |            | V   | V   |  |

Fig. 129

| Position |   | Di | verse A | mino Ad | id | ********** | Amino Acid Configuration to Inhibit Metastases | Amino Acid Configuration<br>to Inhibit Metastases |
|----------|---|----|---------|---------|----|------------|--|---|
| 208      | L |    |         |         |    |            | L  | L.  |
| 209      | G |    |         |         |    |            | G  | G   |
| 210      | L |    |         |         |    |            | Ļ  | 1   |
| 211      | L |    |         |         |    |            | L  | L   |
| 212      | F |    |         |         |    |            | Ę.   | F   |
| 213      | L |    |         |         |    |            | L  | L   |
| 214      | G |    |         |         |    |            | G  | G   |
| 215      | A |    |         |         |    |            | Α  | Α   |
| 216      | G |    |         |         |    |            | G  | G   |
| 217      | L |    |         |         |    |            | L.   | Ļ   |
| 218      | ۶ |    |         |         |    |            | F  | F   |
| 219      | 1 |    |         |         |    |            |  | 1   |
| 220      | Y |    |         |         |    |            | Υ  | Y   |
| 221      | £ |    |         |         |    |            | Ę  | F   |
| 222      | R |    |         |         |    |            | R  | R   |
| 223      | N |    |         |         |    |            | N  | N N   |
| 224      | Q |    |         |         |    |            | Q  | Q   |
| 225      | K |    |         |         |    |            | K  | K   |
| 226      | G |    |         |         |    |            | G  | G   |
| 227      | H |    |         |         |    |            | Ŧ  | Ħ   |
| 228      | S |    |         |         |    |            | S  | S   |
| 229      | G |    |         |         |    |            | G  | G   |
| 230      | L |    |         |         |    |            | L.   | <u>L</u>  |
| 231      | P | Q  |         |         |    |            | ()<br>P  | ○ P   |
| 232      | P |    |         |         |    |            | P  | Р   |
| 233      | R | Ŧ  |         |         |    |            | ()   | 0   |
| 234      | G |    |         |         |    |            | G  | G   |
| 235      | ۴ |    |         |         |    |            | F  | F   |
| 236      | L |    |         |         |    |            | L,   | Ł.  |
| 237      | s |    |         |         |    |            | \$   | S   |